



THE Business History REVIEW

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Management Decentralization: An Historical Analysis

■ This article deals with development of basic management structures of large American corporations. In general, the problem has been one of growing operational complexity; the solution commonly adopted has been operational decentralization. This solution, however, has raised difficult questions of control, and various administrative answers have been evolved. These have fallen into recognizable patterns, for an examination of case histories graphically illustrates the close connection between the nature of a company's business and its administrative structure. Those firms whose activities cross established industry lines have tended toward product decentralization. Companies producing a relatively restricted line have decentralized on a functional or a geographic basis. Market-oriented firms have tended to decentralize on a geographic basis. Among the fifty companies studied, however, other variations are discernible. Historical analysis of the decentralization trend also suggests the importance of management personalities in governing the timing of structural changes and indicates clearly the reasons why some companies have yet to find decentralization a meaningful answer for their prevailing administrative problems.

The past generation has seen three major developments in the organization of the large American industrial corporation. There have been the creation of autonomous operating units, the expansion of specialized staff and service departments, and the systematizing of the top co-ordinating and policy-making group. All three developments are integral and fundamental aspects of the administrative principle that goes by the name of management decentralization. Today both these methods and the broader principles of management decentralization are receiving a great deal of attention. "The principle," Peter Drucker points out, "is being expounded in articles and speeches, in management magazines and management meetings so that by now the phrase at least must be familiar to every American manager."¹

EDITOR'S NOTE: This study was supported by the Sloan Research Fund of the School of Industrial Management, Massachusetts Institute of Technology.

¹ Peter Drucker, *The Practice of Management* (New York, 1954), 209.

Since the idea and practice of decentralization have become so widespread and since decentralization is certainly one of the most significant developments in American business, it seems legitimate for the historian to ask his special questions of the phenomenon. Why, when, and how did large industrial firms begin to decentralize? What firms have not decentralized and why not? How widespread has decentralized management actually become? What accounts for the difference in timing and the methods used in the administrative reorganization of different firms? What basic problems had to be solved in achieving decentralization? Why and how did these problems vary between different firms?

This article attempts to provide some preliminary answers to these questions by examining the changes made during the twentieth century in the over-all administrative structures of fifty of the nation's largest industrial concerns. The information for the study comes only from readily available printed materials such as annual and other reports to stockholders, articles in business and management journals, particularly *Fortune* and *Advanced Management*, and from the few business histories and biographies available on the companies and their managers. Since such sources can only provide brief and incomplete information, the conclusions drawn from them must be tentative. Even where the information is comparatively full, it indicates little about the informal organization of the company, which must be known if the firm's men and measures are to be properly evaluated. Valid and accurate answers to the historian's questions can only be found in the records and correspondence relating to organization problems in the files of businessmen and their companies.

Nevertheless, even within the limitations of the sources and the restrictions of space and time in any such preliminary study, some useful if tentative generalizations can be made.² Certainly the

² Because of the need to keep this preliminary study to a manageable length, this article will say nothing about the legal organization and its relation to the administrative structure of the companies examined. Nor will it discuss the foreign operations of these firms, for management structures in foreign countries have to be adjusted to many non-economic and non-business factors. Neither will the article attempt to describe the techniques of co-ordination, supervision, control, and policy formulation. It will only consider the administrative structures in which these are carried out. Nor will it refer to comparable developments in transportation, utility and financial firms. Of these the most significant were those which took place in the railroad industry before 1900. Finally, it might be well to point out that condensing into a paragraph or two the developments in over-all management structure of a company over a period of years often requires overgeneralization. I hope that these generalizations are

essential problem appears to be clearly defined. "That problem," wrote Donaldson Brown of General Motors in 1927, "is to combine the economical advantages of modern business, with as little sacrifice as possible of that intimate control and development of managerial ability that is the character of the well managed small business."³

There also appears to have been one widely accepted answer to this problem. This was the creation of an organization which included, first, a number of autonomous operating units whose managers handled the day-to-day operating decisions, were responsible for the financial performance of their unit, and had the line authority and staff assistance commensurate with this responsibility. (The criteria for judging financial performance of a unit here included costs, sales, return on investment, and share of the market.) Secondly, the organization built up a central advisory staff of specialists which provided services to the operating divisions and helped the top executives carry out their functions, particularly that of co-ordinating the activities of the divisions. Thirdly, the organization included a top management group which not only co-ordinated but also supervised the divisions. This it did by reviewing and analyzing divisional operating and financial performance and by taking executive action on the basis of these analyses. The major functions of the group, however, were to determine goals, objectives, and courses of action for the company as a whole, to review the effectiveness of prevailing policies, and, where necessary, to adjust such policies to changing current conditions.

Although the problem and the answer were essentially the same for most large companies, the time and the way the problem arose and the answer was reached varied for each firm according to a number of internal and external circumstances. Internal circumstances, those resulting from the firm's historical development and from the personalities and experiences of its managers, of course, differed with every company. External circumstances, however, were usually somewhat the same for companies doing the same type of business. The fifty companies studied here have therefore been divided into ten industrial categories. Four firms, all but one close to the top fifty in size, were included in order to make the industrial

approximations of the truth; should they not be, the reader will do me a favor by indicating where they are wrong or misleading.

³ Donaldson Brown, "Centralized Control with Decentralized Responsibilities," American Management Association, *Annual Convention Series*, No. 57 (1927), p. 11.

categories more representative. The other forty-six companies (see Table 1) comprise the largest industrial firms in the nation by asset size, as listed for 1948 in the Brookings Institution study, *Big Enterprise in a Competitive System*.⁴ The ten industrial categories, in

TABLE 1
THE FIFTY COMPANIES

(Numbers indicate relative size according to 1948 assets.)

Multi-industry firms

<u>Chemical</u>	<u>Electrical</u>	<u>Automotive</u>	<u>Rubber</u>
8. duPont	9. General Electric	2. General Motors	32. Goodyear
15. Union Carbide	17. Westinghouse	10. Ford	37. U.S. Rubber
33. Eastman Kodak	— Sylvania	19. International Harvester	39. Firestone
44. Allied Chemical & Dye		62. Goodrich	
52. Dow		25. Chrysler	

Single-industry firms

<u>Oil</u>	<u>Steel</u>	<u>Non-ferrous materials</u>
1. Standard (N.J.)	3. U.S. Steel	20. Anaconda Copper
4. Standard (Indiana)	12. Bethlehem	24. Kennecott Copper
5. Socony-Vacuum	29. Republic	28. Aluminum Co. of Am.
6. Texas	35. Jones & Laughlin	44. International Nickel
7. Gulf	43. National Steel	45. International Paper
11. Standard of Calif.		
16. Sinclair Oil		
21. Shell Oil		
22. Phillips Ptrlm.		
34. Atlantic Rfng.		

Market-oriented firms

<u>Distribution</u>	<u>Food</u>	<u>Stimulants</u>
12. Sears, Roebuck	27. Swift	18. American Tobacco
23. Montgomery Ward	30. Armour	26. R. J. Reynolds
40. F. W. Woolworth	36. A. & P.	31. Liggett & Myers
60. J. C. Penney	46. United Fruit	38. Distillers-Seagrams Corp.
	47. Natl. Dairy Products	41. Schenley Industries Corp.

⁴ A. D. H. Kaplan, *Big Enterprise in a Competitive System* (The Brookings Institution, Washington, D. C., 1954), pp. 153-54. I have not included Western Electric because it is, for all intents and purposes, an integral part of the American Telephone and Telegraph Company which not only owns it but takes nearly all its non-military production. The Brookings study did not include the

turn, fall into larger groupings. The business of the chemical, electrical, and some of the automotive and rubber firms cross traditional industry lines. On the other hand, most oil, steel, and non-ferrous metal firms have, at least until recently, operated within the boundaries of one industry. The distributing, food, and stimulant firms, which are more concerned with marketing than development, extraction, or production, form a third group. The fifty companies, then, will be considered by industrial categories, which will in turn be grouped under the three divisions: the multi-industry, the single-industry, and the market-oriented firms.

MULTI-INDUSTRY FIRMS

The Chemical Companies

Of the ten industrial categories represented in this study the chemical is best considered first. The rapid growth of that industry in the twentieth century and the ever-increasing diversity of its products have caused the nature of the large chemical firms' operations to change more rapidly than most. As a result, chemical managers have had to pay closer attention than many executives to adjusting the administrative structures of their companies to the changing business situation. That situation has since the 1920's been made more dynamic by the systematizing and institutionalizing of technological research within the chemical firms themselves. It was, in fact, a program of product development and diversification that led the largest of the chemical firms, the E. I. duPont de Nemours and Company, to devise one of the first clearly articulated modern types of decentralized organization for an industrial concern. Because this new structure became the model for later reorganizations and because duPont's original organization was typical of the structure then prevalent in American industry, a description of this innovation provides a useful introduction to an historical analysis of management decentralization in the United States.

The drastic reorganization of the duPont company's administrative form came in 1921.⁵ Before this time the company, which until

Cities Service Company, undoubtedly because that firm was until 1944 a utility as well as an industrial concern.

⁵ This reorganization is described in the annual report of the E. I. duPont de Nemours and Company for 1921, p. 6. The annual report for 1939, p. 21, also comments on organization. Besides these and other annual reports useful information can be found in *Fortune*, Vol. 42 (Oct., 1950), 87 ff.; William H. Mylander, "Management by Executive Committee," *Harvard Business Review*,

the end of World War I had concentrated on the manufacturing of explosives, was managed through a highly centralized, functionally defined organization. The Production Department handled manufacturing, the Sales Department the marketing, the Purchasing Department the buying of materials and so forth. Department heads reported directly to the president, who made the major management decisions and carried most of the management responsibility. In planning and policy-making he was aided by an executive committee made up of himself and the department heads. The president and the executive committee also supervised the few subsidiaries that could not be easily fitted into this functional structure. In 1920 these subsidiaries included a handful of plastic and paint concerns which the company had recently purchased as part of a considered program to put the company into the manufacturing of products other than explosives.

Shortly after the Armistice, the company decided to expand greatly this diversification program, which had been set aside with the coming of the war in Europe. The president, Irenee duPont, then instituted a study of the administrative changes required. Clearly, there were manifold problems involved in adjusting the functionally defined departments to the processing and marketing of markedly different lines of products. Those problems were enhanced by the difficulty of obtaining a top management with the wide technical knowledge required to understand the intricacies of production and the complexities of marketing the different items. The company therefore decided to create five new "industrial" or product departments — the Cellulose Products, Pyralin, Paint, Dye-stuff, and Explosives departments. Each department was placed under a general manager who had his own staff, who had full authority over the development, processing, and selling of his department's products, and who became responsible for the financial performance of his division.

The work of the departments was co-ordinated and supervised by a new executive committee which was now made up of men who were no longer concerned with the immediate operations of a specialized department but, instead, devoted their full time to managing the company as a whole. Moreover, the committee collectively rather than the president individually became responsible for policy-making and for over-all administration. The finance

Vol. 33 (May-June, 1955), 51-58; and William S. Dutton, *DuPont, One Hundred and Forty Years* (New York, 1942), especially book IV, chaps. 1, 2.

committee, which included directors who had no managerial connection with the company, continued to have a veto on the executive committee's decisions, but it did not initiate or carry out policy.

The general officers on the executive committee were assisted by newly formed specialized service or auxiliary departments including engineering, sales, development, research, and accounting. These departments advised and serviced the operating departments, playing an important part in co-ordinating the policies and programs of the operating units. By providing all departments with expensive specialized services yet leaving the major operating responsibilities to autonomous, self-contained units, the company hoped it might combine the economies and other benefits of large-scale business while still retaining the advantages of a smaller, more intimate management. These hopes seem to have been realized, for, although new operating and service departments have been formed and old ones reshaped, the basic organization of the duPont company has remained essentially untouched during the years since 1921. Moreover, this type of organization has been increasingly adopted by other large American firms.

Union Carbon and Carbide, the second largest chemical company, reached this same type of organizational structure before 1930. It did so, however, by quite a different road. Carbide's major problem was in forming an effective co-ordinating, supervising, and policy-making center rather than, as at duPont, in creating autonomous operating units. Formed in 1917 as a merger of four companies (Carbide, Prest-o-lite, Linde, and National Carbon), all making quite different though chemically related products, Union Carbide expanded rapidly during the twenties through purchase of smaller firms and development of new products from its research laboratories. One of the major needs quickly became what was called "the synthesis of its management."⁶

By the end of the decade the company's more than twenty subsidiaries had been placed in four operating "groups": carbon, gases, alloys, and chemicals. Each was managed by a vice-president, who enjoyed a wide range of authority and responsibility. The work of the operating groups was co-ordinated by an "officers' committee" which included the president, the senior vice-presidents, the treas-

⁶ The quotation is from *Fortune*, Vol. 23 (June, 1941), 126. This article, which begins on page 61 of that issue, is the best single source of information on Union Carbide. It can be supplemented by the company's annual reports and by an article on the chemical industry in *Fortune*, Vol. 16 (Dec., 1937), 83 ff.

urer, the vice-presidents in charge of the different groups, and the men in charge of the major advisory service departments. As at duPont, the central service departments performed only advisory functions, while top policy-making and supervision was the responsibility of an executive committee made up of officers not directly concerned with operations. In 1941 those officers included the president, chairman of the board, two senior vice-presidents, and one or two directors. Again as did the duPont company, Union Carbide has reshaped its operating divisions and groups and added new ones, particularly in the years immediately following World War II. In other words, the boundaries of the decision-making areas of the group managers have been constantly redefined with the development of new products and with changes in demand and marketing techniques. Such a flexible administrative structure, with decentralized operations and centralized control, may have played a part in stimulating the rapid growth, the increasing diversity of products, and the outstanding earnings record of both duPont and Union Carbide.

The value of a flexible administrative organization is further emphasized by the story of Allied Chemical & Dye Company. Like Union Carbide, Allied Chemical was formed by a merger. Unlike its two major competitors, however, it did not, after the merger of five chemical companies in 1920, develop new products either through further purchases or by intensive research.⁷ Nor did the parent company, which was dominated by one of its founders, Orlando F. Weber, attempt to systematize the co-ordination and supervision of its operating subsidiaries. Rather, as was typical of the old-time holding company, its function was primarily to maintain a tight control over the price, production output, and financial policies of the operating units. Possibly this centralized, conservative, inflexible administrative structure helps to account for Allied's dividend record, which during the 1930's was much less satisfactory than its competitors', and the company's drop, between 1935 and 1948, from 26th to 42nd place on the list of America's largest industrials.

The war demands made it easier for Allied Chemical to perpetuate

⁷ These five companies included the Barrett Company (formerly the American Coal Products Company), the General Chemical Company, the National Aniline and Chemical Company, the Semet-Solvay Company and the Solvay Process Company. The best available articles on the company are *Fortune*, Vol. 1 (June, 1930), 81 ff.; Vol. 50 (Oct., 1954), 119 ff. Except for recent years *Moody's Industrial Manual* gives more information than the company's annual reports.

the luxury of its centralized organization. But with the war's end and the death of Weber in 1945, change came. The new president, Frederick Emmerich, began quietly but effectively to reshape his company's organization, following quite consciously, according to *Fortune*, the duPont model. Subsidiaries were re-formed into operating divisions, their managers enjoying an autonomy similar to department or group heads in Union Carbide and duPont. New central service departments, such as public relations and labor relations, were added and old ones were expanded. The general policy-making and supervising executive committee consisted of officers who were not directly engaged in operations. Since 1948 the company's sales and profits have expanded. The development of new products has led to the formation of two new operating divisions. The company now appears to be regaining its position and prestige as a leader in the chemical industry.

If the experience of Allied Chemical indicates the dangers of a static and conservative management, that of the Dow Chemical Company suggests those that may arise when a management fails to pay close attention to administrative readjustment during a period of rapid growth. Before World War II this company was a medium-sized, family run, financially solid firm whose products came from one source, brine.⁸ The war brought new demands and a great increase in production. Then, after the war, the company embarked on an aggressive expansion program which brought it by 1948 to 52nd place among the leading industrial firms. During much of this growth Willard Dow ruled the company with a firm, if informal, hand. He made basic policy and directly supervised the three older divisions, which were based on plant location rather than on products, and the two new product divisions, magnesium and plastics, which were created shortly after the end of the war. In 1944 he did form an "operating board" to help him co-ordinate the activities of the rapidly expanding geographical divisions.

After Dow's death in 1948 more attention was given to organization. The new president, Leland I. Doan, set up a three-man policy-making and supervising team, which was aided by an "inside" board of directors. More effective operational integration was attempted by the organization of co-ordinating committees for research, production, production economics, and engineering. At the

⁸ *Fortune*, Vol. 3 (April, 1931), 58; Vol. 45 (May, 1952), 104 ff.; and the article on the chemical industry in *Fortune*, Vol. 16 (Dec., 1937), 83 ff. provide the best information on Dow. Its post-World War II annual reports are also useful.

same time, the central sales division and new labor relations and public relations departments were given the power to co-ordinate and control their functions among all the divisions. This proliferation of co-ordinating devices, the existence of two very different types of operating divisions, and the saddling of policy-making and supervisory personnel with day-to-day management duties suggests that Dow's over-all administrative structure is in a transitional stage. Although its managers still echoed Willard Dow's boast that the company had and needed no organization chart, they admitted by 1952 that lines between staff, operations, and top management structures needed to be "sharpened."⁹ Possibly the growing administrative strains were one reason why the company announced in its 1954 report that it was "tapering off" its expansion program.

The administrative story of the Eastman Kodak Company differs from its competitors in the chemical industry primarily because of the firm's concentration on two or three major lines of products rather than a large number of lines based on a broad chemical technology. Eastman Kodak has tended to be more concerned with vertical integration, the controlling of all processes from the raw material to the ultimate consumer, than in development of new products. Significantly, its first venture into the chemical business did not come, as in the case of duPont, from a decision to diversify production, but because the film and camera works at Rochester were unable to take the full output of the Tennessee Eastman Company, which the parent company set up at Kingsport, Tennessee, to provide Rochester with celluloid and other basic materials.¹⁰ Although Tennessee Eastman during the 1930's and 1940's enlarged its production of cellulose products to include fabrics, yarns, and plastics, it expanded less than its competitors into other areas of chemical production. Except for the making of military items, Eastman Kodak's only major expansion outside of Rochester and Kingsport was the formation, in 1951 and 1952, of Texas Eastman and Eastman Chemical Products for the purpose, primarily, of providing a source of materials and a marketing agent for Tennessee Eastman. Eastman Kodak's one other significant nonphotographic venture came in 1938 with the formation, in co-operation with General Mills, of the Distillations Products Industries, Inc. for manufacturing

⁹ *Fortune*, Vol. 45 (May, 1952), 177. The quotation in the following sentence is from the Dow Chemical Company's annual report for 1954, p. 3.

¹⁰ The information on the Eastman Kodak Company comes more from the annual reports of the company than from an article on the firm in *Fortune*, Vol. 50 (July, 1954), 76 ff. Particularly useful were the reports for 1945, 1947, 1951, and 1952.

vitamins. After the war this unit became an operating division of the Eastman company.

Eastman's concern with integration rather than diversification has naturally affected its management structure. Its American organization today includes two major units and a minor one: Kodak, centered in Rochester, Tennessee Eastman (which manages Texas Eastman and Eastman Chemicals), and Distillations Products. Each unit is operated by a centralized, functionally departmentalized organization quite similar to that of the duPont company before 1921. Each appears to be quite independent of the other. There is no large staff or top management group with full-time responsibility for co-ordinating, supervising, or even making policy for the company as a whole. Should Eastman decide in the coming years to develop new lines of products by giving its chemical business priority, its organization or at least that of Tennessee Eastman will probably have to be divided into a number of semiautonomous units. If this is done, then thought will have to be given to the formation of a co-ordinating and controlling central office.

The experience of the large chemical firms emphasizes two important points. First, it clearly shows that the decentralized organization requires both an effective control center and well-defined autonomous parts. In the case of Allied and of Union Carbide, companies which resulted from mergers, the major problem was in forming the center. For a company like duPont, which grew by adding new plants and products, the first problem was to define the parts. This, in turn, required study of the role and functions of the central headquarters. Dow and Eastman, if they continue to expand their chemical production, will soon or may already be facing the same type of problems duPont found itself confronted by in 1921. It seems likely that their answers will not be greatly different from duPont's.

Secondly, the experience of these chemical companies points up the value of a management structure which clearly differentiates between the generalist and the specialist. In the older functionally defined, centralized structure and in the older loosely federated holding companies there were none-too-many generalists and no clear-cut division of function between the generalist and the specialist. In the new type of organization developed by duPont, Carbide, and Allied, the specialist was assigned primarily an advisory or service role. At the same time, the creation of product divisions permitted more operating managers to become generalists.

This was because the managers of the new product divisions, unlike functional department heads, had to make decisions about production, sales, accounting, personnel, and every other type of business function. In the new structure, too, the top management came to be made up of men who made broad decisions about a large number of very different products as well as about the various business functions. The new structure, in fact, created two levels of generalists — the operating generalist who focused on the industry in which he operated and the policy-making generalist who focused on the broader national and international business economy. By requiring a larger number of operating generalists, the decentralized organizational structure provided excellent opportunities for the training of top policy-making generalists.

The Electrical Companies

The history of the large electrical firms further stresses the importance of creating a strong center as well as strong parts and of defining clearly the role of the specialist and of the operating and policy-making generalist. For General Electric, Westinghouse, and Sylvania the most serious continuing administrative problem has been the formation of an effective central headquarters. This was partly because these companies, like Union Carbide and Allied Chemical, resulted from mergers and partly because they were multi-product firms based on a broad technology rather than on one industrial process. Well before 1900, General Electric and Westinghouse were making a number of very different products, and from the first they had difficulty in co-ordinating and supervising these varied operations.

These difficulties became increasingly acute after World War I, when the two firms began to turn more to the production of consumer goods, particularly electrical household appliances. At the end of World War I, General Electric led the way with the formation of such subsidiary companies as the Edison Electrical Appliance Company, the Electrical Vacuum Cleaner Company, and the Radio Corporation of America.¹¹ It is not clear from the avail-

¹¹ Much has been written on General Electric. *Fortune* articles include Vol. 3 (Jan., 1931), 30 ff.; Vol. 3 (Feb., 1931), 39 ff.; Vol. 21 (Jan., 1940), 68 ff.; Vol. 25 (March, 1942), 65 ff.; Vol. 35 (May, 1947), 121; Vol. 45 (May, 1952), 132 ff.; Vol. 48 (July, 1953), 142; and Vol. 52 (Dec., 1955), 110 ff. A useful brief background can be had from the Harvard Graduate School of Business Administration's mimeographed case study on the history of the General Electric Company prepared by John Clark. The annual reports of the company suggest a good bit about the company's organization; those of 1951 and 1955 and the

able evidence when these and other new subsidiaries were, like the older incandescent lamp and heavy electrical equipment units, grouped into larger operating departments. In any case co-ordination and some supervision of General Electric's many different operating subsidiaries and divisions was done by a number of co-ordinating committees and by the central staff departments of engineering, manufacturing, research, and sales. In order to carry out these functions, the staff executives often had real authority over the operating managers. The division of command and responsibility between the line, staff, and top management were, however, none too clear. For example, the responsibility for sales was usually separated from that for manufacturing. The central sales office set policy, but the actual marketing of goods, particularly consumers' goods, was handled after 1926 by commercial vice-presidents whose jurisdictions were regionally delimited. The sale of heavy apparatus, such as railroad and public utility equipment, on the other hand, was placed under the authority of a vice-president with offices in Schenectady. The credit for making this heterogeneous administrative complex work as well as it did goes to the company's brilliant, dictatorial president, Gerard Swope. Although he had an advisory committee of top executives, all reports indicate that major administrative and policy decisions were almost always his alone.

Swope's retirement in 1940 made imperative a re-thinking of General Electric's administrative structure. The reorganization plans of the new president, Charles E. Wilson, were postponed by the war and were not put into effect until 1946. The final reorganization did not occur until after Ralph J. Cordiner, who was primarily responsible for drawing up Wilson's administrative plans, became president in 1950.

In 1946 General Electric's diverse activities were divided along product lines into a number of operating divisions. Each was managed by a general manager who had a full staff and who was given wide latitude in operating decisions. These divisions were in turn placed into seven "groups" according to the company's major lines of business. They included appliances, apparatus, lamp, electronics, air conditioning, chemical and "affiliated companies." Co-

report to the stockholders at the annual meeting in July, 1946, mention organization specifically. There are also two detailed articles by Ralph Cordiner, the man most responsible for the company's major reorganization, one written before and one after the changes, "The Implications of Industrial Decentralization," American Management Association, *General Management Series No. 133* (1945), pp. 24-32, and "Problems of Management in a Large Decentralized Organization," same series, No. 159 (1952), pp. 3-17.

ordination and supervision of the operating units were still done by the nine staff departments and by committees, of which the advisory and operations committees were by far the most important.

The reorganization of 1951 further reshaped operational units by creating seventy "product departments" within twenty newly formed "operating divisions." Even more significant was the redefinition of the functions of the central staff and executive units. Eleven new "service divisions" replaced the old staff departments. Unlike their predecessors they had no authority to determine or carry out policy. Rather their function was to provide specialized services on an advisory basis to both the operating units and the newly created "executive office," and to help both to plan and formulate policy.

The new executive office, which took over from the staff and committees the over-all co-ordinating, supervisory, and policy-making functions, consisted of the president, the chairman of the board, and the executive vice-presidents in charge of the five operating groups and the vice-presidents in charge of the nine service departments. Since most day-to-day administrative decisions were made by the heads of the operating divisions, the group executive vice-presidents were, like the top managers in duPont, generalists who devoted most of their time to considering the affairs of the company as a whole. However, in General Electric the chain of command was clearer than in duPont, where the division managers were accountable to a group of men (the executive committee) rather than to one specific executive. Otherwise, the leading electrical company had in a very different fashion reached much the same type of management structure as that devised by the leading chemical firm thirty years before.

Westinghouse has had to meet much the same problems as General Electric, but its current answer, while having many similarities to that of its competitor, centralizes many more operating decisions at headquarters. In the 1920's product diversification raised problems which had to be given direct attention sooner than at General Electric. This was because of the major change in command caused by the death in 1927 of Guy Eastman Trippe, chairman of the board since 1912.¹² When A. W. Robertson became chairman in

¹² This information on Westinghouse comes from its annual reports, supplemented by *Fortune*, Vol. 17 (Feb., 1938), 42 ff.; Vol. 48 (July, 1953), 142. Also useful was *Facts and Figures for Stockholders — Westinghouse Electrical Manufacturing Company July, 1938* (Pittsburgh, 1938). *Fortune*, Vol. 53 (March, 1956), 113 ff., describes Westinghouse's current troubles but says little on organizational structure, except that a new post, Vice-President in Charge of Operations, has been created.

1929 he began his administrative reforms by delegating more authority and responsibility to the managers of the various plant divisions. At the same time, however, he began tightening the central controlling unit. He relied even more than did General Electric top executives on the staff departments for co-ordination and supervision. The heads of the enlarged research, manufacturing, and engineering departments became "responsible for coordinating these functions as applied to each division . . . as the means of preserving the uniformity and solidarity of the organization."¹³ The sales department was given even tighter control over sales policy, particularly over consumers' goods, while the selling was in 1930 turned over, as had already been done in General Electric, to regional vice-presidents. In 1934, with the creation of a merchandising division, sales personnel were given authority over "the related engineering and manufacturing activities, wherever the main outlet for the product involved is through merchandising channels."¹⁴

After World War II Westinghouse, like General Electric, went through a basic reorganization. The problem, essentially that of its competitor, was how to define more effectively the role and functions of the operating units, the staff departments, and the central controlling unit. The Westinghouse reorganization, done in large part through the services of the management consultant firm of Cresap, McCormick and Paget, was completed in 1951, at which time Mark W. Cresap, Jr., became the assistant to the president. The various operating divisions were organized more carefully around related products, and their managers obtained more authority and responsibility, particularly over sales. The ten staff departments were given an advisory rather than controlling status. Their co-ordinating and supervising functions were turned over to the vice-president in charge of four product "groups" (apparatus, consumer products, defense products, and general industrial products) into which the operating divisions had been placed. Unlike General Electric, the group vice-presidents have much more direct control over their division managers, including the power to hire and fire top personnel. Unlike the executive officers of General Electric or duPont, they also have large staffs of their own. Therefore, decision-making must certainly be more centralized at Westinghouse than it is in other electrical or chemical companies. Moreover, its top policy-making and supervisory group (consisting of the four group vice-presidents, the president, his assistant, and some part-

¹³ *Facts and Figures for Stockholders July, 1938*, p. 3.

¹⁴ The annual report of the Westinghouse Electric Company for 1934, p. 10.

time directors on the finance and executive committee) does not enjoy the services of as many full-time generalists as do many other electrical and chemical companies.

Westinghouse's predilection for a more centralized organization is even more significant when Sylvania's success with decentralization is considered. Sylvania Electric Products, Inc. was selected for study rather than the larger Radio Company of America because it was more of a direct competitor with the two giants in the industry, because it has been the fastest growing of the electrical companies, and because, as it grew, it developed a wide variety of products.¹⁵ For several years after it was founded by a merger in 1931, Sylvania remained a loose union of two almost independent units making quite different products in two different areas, incandescent lamps in Salem and radio tubes in Pennsylvania. Until the coming of World War II the company had almost no centralized direction. Then in 1941, after Walter Poor, the youngest of the three brothers who founded the Salem end of the business, became executive vice-president, an executive committee was formed and a central office set up in New York City with a comptroller, a director of industrial relations, and an advertising and sales office. In the following year directors of manufacturing and engineering were appointed. The authority of this central staff was constantly increased during the great expansion of the war years, which transformed Sylvania into a large, multi-product concern.

Immediately after the end of the war the company's administrative structure was thoroughly reorganized in order to allow, as the 1945 annual report records, "the company to grow along projected lines without placing proportionately greater burdens upon top management."¹⁶ Five product divisions were formed, headed by managers who were provided with staffs of their own. The New York headquarters staff was given primarily planning, consultive, and over-all co-ordinating duties. At first Sylvania, as General Electric and Westinghouse had done earlier, continued to centralize sales. In 1950, however, Chairman of the Board Don G. Mitchell placed, to use his own words, "line authority for sales under the

¹⁵ The information on Sylvania comes largely from its annual reports (those for 1945, 1950, and 1953 are especially useful), from Don G. Mitchell, "Big Business in Small Plants," *Advanced Management*, Vol. 15 (Dec., 1950), 2-5; and *Fortune*, Vol. 35 (May, 1947), 113 ff. Additional background data came from the Harvard Graduate School of Business Administration's mimeographed case study on the history of the Sylvania Electric Products, Inc. prepared by John Clark.

¹⁶ The annual report of Sylvania Electric Products, Inc. for 1945, p. 17.

several product divisions because we believe that sales and production must be coordinated to achieve the best results. . . . At the same time, however, we have retained the functional supervision of sales at headquarters for general policy, coordination and consultation."¹⁷

After 1950 Sylvania's major administrative problem concerned effective top supervision and policy-making. In that year Walter Poor died and Mitchell became chairman of the board. H. Ward Zimmer took Mitchell's place as president. Zimmer, who believed the company was too loosely organized, attempted to handle most of the top management decisions himself, relying almost entirely on the assistance of the board chairman and members of an enlarged "inside" board. The resulting pressure of work was so great that it may have contributed to Zimmer's premature death in 1954. In any case, earlier in that year the company, in order "to accomplish further decentralization of top management," appointed three vice-presidents in charge of operations. The division managers reported to them rather than to the president, as they had done previously.¹⁸ With a growing group of generalists making policy and providing executive supervision, Sylvania may achieve what it set out to do in 1945, continuing to expand (it now has nine divisions) without overburdening top management.

Sylvania, then, has developed an over-all administrative structure which is on a smaller scale similar to that of General Electric. General Electric appears to be somewhat more decentralized than Sylvania, but both are certainly more so than Westinghouse. In Westinghouse, too, there seems to have been less conscious effort to create generalists at either policy-making or operating levels. The recent performance of the three firms indicates that decentralization of operations and the development of generalists may well have a correlation with continuing growth, profits, product development, and operational harmony.

The Automotive Companies

With some significant exceptions, the leading automotive and rubber firms differ from the top electrical and chemical concerns in that, until recent years, they tended to concentrate on a few closely related products rather than on several lines of goods based on a common technology. Several of the foremost automotive and

¹⁷ Mitchell, "Big Business in Small Plants," p. 4.

¹⁸ The annual report of the Sylvania Electric Products, Inc. for 1954, p. 13.

rubber companies were also small individual or family run firms which grew large rapidly. As a result they were operated for a long time through centralized, vertically integrated, functionally departmentalized organizations. On the other hand, the two most notable exceptions to these generalizations, the United States Rubber Company and General Motors Corporation, were pioneers in the new decentralized type of management. In both these companies the duPonts played a significant role.

In fact, the basic reorganization of duPont and General Motors was undertaken almost simultaneously and by men who worked closely with each other. In 1920, the year when the duPont company was beginning to plan a readjustment of its administrative structures in order to meet the demands of a new multi-industry business, Pierre duPont went to Detroit as president of General Motors to rationalize the financial and administrative chaos left by that sanguine promoter, William C. Durant. Durant in the years after 1908 had pulled together under one roof a vast hodge-podge of automobile, truck, farm equipment, parts, and accessory plants, but had done little to integrate or co-ordinate this sprawling industrial empire, which in 1919 was already the fifth largest industrial concern in the country.

To Pierre duPont the challenge of General Motors was to find a structure which would "knit more closely its different divisions in order that the greatest benefit might result from the co-operative conduct of this large business."¹⁹ Although his problem was very different from that faced by his brother in Wilmington, his answer was much the same. The various subsidiaries were regrouped into large operating divisions based on products or, as in the case of the automobile divisions, on different price markets. In operating their divisions, the general managers in charge were given as full authority and responsibility for decision-making as those in duPont. They

¹⁹ The annual report of the General Motors Corporation for 1921, p. 6. Other annual reports having information on over-all administrative structure are those for 1928, 1936, 1937, and 1943. Also useful were Donaldson Brown, "Centralized Control with Decentralized Responsibilities," cited above, and Edgar W. Smith, "Organization and Operating Principles," American Management Association, *Handbook of Business Administration* (New York, 1931), pp. 1474-88. *Fortune*, Vol. 17 (April, 1938), 73 ff.; Vol. 18 (Dec., 1938), 41 ff.; Vol. 32 (Nov., 1945), 125 ff., provided needed background information as did Arthur Pound, *The Turning Wheel* (New York, 1934), pp. 199-202, Peter Drucker, *The Concept of the Corporation* (New York, 1946), Part II, chap. ii, and Ernest Dale, *Planning and Developing the Company Organization Structure*, American Management Association — Research Report No. 20 (New York, 1952), pp. 98-106.

were advised by the central office staff departments, while an executive committee of full-time senior line and staff officers set the broad policy for the division managers and evaluated their performances. As at duPont, a finance committee including several men who were not full-time company officers had a final say on the larger matters of policy and administration. Co-ordination between the divisions and between the specialized, functionally defined advisory staff departments, as well as between the specialists and the operating and policy-making generalists, was effected by a large "operations committee" and, even more effectively, by smaller "inter-divisional relations committees." The latter at first included purchasing, sales, general technical, works' manager, and advertising committees. The organization Pierre created differed from the one his brother Irene was forming in Wilmington in that the senior line officers were more specifically responsible for the operations of the different "groups" of divisions. This may have meant they tended to become somewhat more specialized than the duPont company top executives but also that the line of command from the divisions to top management was more clear than in the Wilmington company. The appointment after 1942, however, of two or more executive vice-presidents has increased the number of generalists in the top policy-making unit.

Since 1921 the original divisions have been expanded and reformed and new ones have been added. The structure of the central unit has also occasionally been altered, the most important change coming in 1937.²⁰ At that time an attempt was made to define and allocate the three basic top management functions to three different units. The executive committee, which was transformed into the "administration committee," was to concentrate on executive supervision. The finance committee, which was turned into the "policy committee," was to focus upon policy formulation. The co-ordinating role of the interdivisional committees, called since 1934 "policy groups," was more clearly defined and the number of groups substantially increased. Still later, apparently because of difficulties encountered in trying to divide the top management duties by function, both executive supervision and policy formulation were returned to the old executive committee, now called the "operations policy committee." The old finance committee became the "financial policy committee" and regained its place as the final court of

²⁰ See especially the annual report of the General Motors Corporation for 1937, pp. 37-38.

appeals and approver of policy through its control of the raising and allocation of funds. Today, then, the company's over-all structure is much the same as it was in 1921. In recent years General Motors has served as a model for administrative reorganizations in other leading automotive concerns.

International Harvester, which was the first to decentralize along General Motors lines, did not do so until 1943. Like General Motors it was formed as a merger. Yet because it was smaller, better integrated, and oriented toward an established market — the farmer — it avoided the severe financial and administrative maladjustments that General Motors suffered before 1921. From its founding in 1902 until the late 1920's Harvester ran quite successfully as a tightly centralized, vertically integrated, functionally departmentalized organization.²¹ The lean agricultural years beginning in the 1920's and the revolution in agricultural machinery caused by the gasoline engine turned the company to the development of new products and to the radical redesigning of old ones. This new emphasis on research and development and the changing nature of the market put a strain on the company's existing organizational structure. No major action was taken, however, until after the death in 1941 of Harold F. McCormick, chairman of the board, and Addis E. McKinstry, chairman of the executive committee, and after the growing complexities engendered by wartime expansion began to place even more serious strains on the existing framework.

In 1942 and 1943 the company went through a major administrative overhauling. Six product divisions were formed, Motor Truck, Industrial Power, Farm Tractor, Farm Implement, Fiber and Twine, and the Wisconsin Steel Division. The division, the 1943 annual report pointed out, "is a new unit in our Company. It differs from a department in that a department deals with only one function, such as engineering, personnel or sales, whereas a division is a group of departments, each concerned with its own functions but all interested in the same product or group of products."²² The Motor Truck and the Industrial Power divisions were completely autonomous, while the Tractor, Implement, and Fiber divisions had their selling functions placed under the General Line Sales Depart-

²¹ Background information on International Harvester came from its annual reports and from *Fortune*, Vol. 8 (Aug., 1933), 21 ff. The 1928 report suggests the difficulties created by the changing nature of the company's market.

²² This and the following quotation are from the annual report of the International Harvester Company for 1943, p. 14. This report describes the reorganization in detail. Other reports that mention organizational changes were those for 1918, 1931, 1935, 1942, 1945, and 1946.

ment. A vice-presidency of Merchandising Services was formed to provide over-all company services through its Operations Research, Credit and Collection, and newly formed Consumer Relations Department. This last combined many functions of the old advertising, sales, and executive units, and was to co-ordinate and improve the company's relations with its present and potential customers. Other co-ordinating functions were given to another new staff office, the vice-presidency of Supply and Inventory, which was designated to carry out centralized purchasing and inventory control and "to provide a closer co-ordination of the flow of materials through the manufacturing and distributing processes." After the war, a final capstone to the structure was set with the formation of a small group of full-time generalists who had no operating responsibilities. The group included the chairman of the board, the president, and three executive vice-presidents who were to supervise the divisions and formulate over-all policy.

The Ford Motor Company copied the organizational structure of General Motors much more consciously and closely than did International Harvester. It did so, as is well known, only after the retirement of its founder. Moreover, because Henry Ford had held the reins so long, his company was in 1945 in a precarious position. After 1927 it made comparatively little money and steadily lost its share of the market. Ford's amazing decline and General Motors' just as phenomenal rise in the 1920's and 1930's was at least partly caused by the differences in management structure and methods. In any case, when young Henry Ford II in 1946 took on Ernest R. Breech as his executive vice-president, he hired him specifically to install a General Motors type of management. Breech began at once, to use the words of *Fortune*, "clapping the G. M. organizational garment onto the Ford manufacturing frame, trimming the garment here and filling out the frame there. Nobody around Ford makes any bones about this, and indeed, one of Breech's first acts was to hand around copies of a semi-official G. M. text on decentralization."²³

The garment needed adjustment primarily because the elder Ford had been less concerned than General Motors about development of a number of products and more interested in vertical in-

²³ *Fortune*, Vol. 35 (May, 1947), 88. Other useful articles are *Fortune*, Vol. 45 (March, 1952), 97 ff.; Vol. 50 (Sept., 1945), 123 ff. I have also made use of a current organization chart of the company. Keith Sward, *The Legend of Henry Ford* (New York, 1948) especially in chap. 14, highlights the business and management costs of the elder Ford's organization methods.

tegration. The operational divisions that Breech set up in 1946, therefore, were divided into two major groups, one including five car and truck divisions and the other including nine "basic manufacturing" divisions. There was also a "tractor and implement" division and the Ford International Division. Several specialized service departments were formed to advise both divisional and central management, as well as to assist in co-ordinating the activities of the divisions. However, co-ordination appears to have been achieved primarily through several subcommittees of the large administration committee. These were similar to the General Motors policy groups. Executive supervision and policy-making, on the other hand, were concentrated in the fourteen-man executive committee, which consisted of the more important line and staff vice-presidents as well as Breech and Henry Ford II.

The Chrysler Corporation, because the nature of its operations differed from both Ford and General Motors, had until very recently less need for the new model, decentralized management.²⁴ Small, with no great steel, glass, body, parts, and accessory plants, it was primarily an engine-making, assembling, and marketing organization. Given this type of operation, Walter Chrysler was able to run the firm with the assistance of K. T. Keller, B. E. Hutchinson, and one or two other close associates.

Since Chrysler's death, the revival of Ford, and the increasing loss of the company's share of the market, the company has been forced to give increasing thought to both product development and administrative organization. Until 1950 it remained structured along functional lines, with only a small central staff and a small top management group of five men — President Keller and the heads of the engineering, sales, production, and financial departments. In that year a new top executive group headed by Lester L. Colbert took over. In the next the staff was enlarged by expanding the research and labor relations departments and by making their chiefs vice-presidents. In 1953 the managers of the auto and manufacturing divisions were also promoted to corporation vice-presidencies, were given more authority over all phases of the processing of their products, and were for the first time made responsible for the financial performance of their units. During 1954 divisional authority

²⁴ Information about Chrysler's history can be found in *Fortune*, Vol. 2 (Oct., 1930), 73 ff.; Vol. 12 (Aug., 1935), 30 ff.; Vol. 22 (Dec., 1940), 57 ff.; and Vol. 38 (Oct., 1948), 103 ff. The information on the current reorganization comes from the annual reports of the company since 1950 and from *Fortune*, Vol. 49 (April, 1954), 127 ff.; and *Newsweek*, Vol. 46 (Aug. 22, 1955), 75-77.

and responsibility, particularly over sales, were increased and divisional staffs were enlarged. As the company's reorganization continues under N. W. Misch, recently appointed vice-president in charge of organization, more attention may be given to the role and structure of the central staff and top management units. The final result will probably not be too different from the structure Pierre duPont created for General Motors thirty-five years ago and which International Harvester and Ford adopted in the 1940's.

The Rubber Companies

The leading rubber firms have remained more centralized than the major automotive firms. And where change has come, it has been more the result of diversification of product than of growth. The small companies which, like Goodyear and Firestone, grew large by concentrating on the tire business have only just begun to feel the administrative strains created by a broadening of their product lines. Goodrich, on the other hand, which has maintained over the years a policy of diversification but which has also had a large share of its total business in tires and tubes, has long wrestled with the problem of finding an adequate over-all organizational structure. However, Goodrich very recently attained and Goodyear and Firestone seem to be working towards the type of decentralized organization which the oldest and most diversified of the rubber companies, the United States Rubber Company, developed many years ago.

The United States Rubber Company, in fact, had formed product divisions even before the duPont company.²⁵ Its administrative history provides one of the most useful studies of the transformation of an old-fashioned "trust" into a modern decentralized operating company. The rubber trust, born in the 1890's as a combination of many firms, controlled over 75 per cent of the nation's footwear business, then the largest market for rubber in this country. Because of the relatively slow growth in the demand for rubber footwear and clothing, the company decided in 1910 to diversify its operations by developing rubber products that could be used for industrial purposes. The Development Department, which was formed

²⁵ The annual reports of the United States Rubber Company provide quite detailed references to diversification and organization. The reports for 1910 to 1914, and 1916 to 1918 all have something to say on these matters. Information on the later reorganization can be found in the annual reports for 1929, 1930, 1934, 1935, and 1938, and in *Fortune*, Vol. 9 (Feb., 1934), 52 ff. For more current organizational matters see the annual report for 1945 and *Business Week* (Dec. 11, 1948), 83-84; *ibid.* (Sept. 19, 1953), 46.

to examine the potentialities of different new products, was also given the task of standardizing plant, equipment, and methods and making more effective the over-all organization of the company. At this time, too, the company became better integrated vertically through the purchase of large rubber plantations in the Far East. Just as the company was beginning to diversify, the coming of the automobile assembly line caused a sudden and enormous growth in the tire business.

These changes in the nature of company operations led the president, Samuel Colt, to follow the recommendations of the Development Department and to place the different operating units under first two and then three product departments — the tire, the industrial goods, and the footwear and clothing departments. Each was headed by a vice-president, as were the three major staff units (legal, finance, and development) and the separate department for all overseas activities. To co-ordinate the work of the different operating and staff departments their heads met regularly as the "operating council." Executive supervision and policy formulation were left to the president, the chairman and vice-chairman of the board, and an executive committee of "outside" directors. The only link between the full-time administrators in the operating council and the part-time policy-makers in the executive committee was the president. President Samuel Colt and his associates, who completed their new organization by 1918, failed to think through as carefully as did the duPont company managers three years later the structure and functions of the central staff and top management units. Nevertheless, the experience of the United States Rubber Company in forming product divisions may very well have been studied by the duPont company's Development Department when it was drawing up plans for that firm's reorganization.

In any case, the duPonts had a hand in the final rationalization of the United States Rubber Company's administrative structure in 1929 and 1930. After Colt's retirement in 1920, Charles B. Segar, a Wall Street financier and formerly president of the Union Pacific Railroad, became U. S. Rubber's president. Segar's interest was in expansion, not administration. Like many businessmen of the period he was more concerned with adding properties than in the effective operation of units he already controlled. His policies helped bring on serious financial difficulties for the company, which became worse after the collapse of rubber prices after 1926. In 1928 the duPont family purchased 30 per cent of the company's stock and

sent Francis B. Davis and William de Kraft to New York City to reorganize its administrative and financial structures. Davis first completely revamped the company's physical plant by shutting down some plants, re-equipping others, consolidating some operations, and dispersing others. Next, he redefined the operating areas of the different product divisions and the duties and responsibilities of their managers. The division heads were apparently at this time given the full responsibility for financial performance which they did not seem to have had earlier.

Finally, Davis created a central co-ordinating, supervising, and policy-making unit very similar to that of duPont. The number of service and staff officers was enlarged but their duties became primarily advisory and consultive ones. A new executive committee of full-time executives, who were more generalists than specialists, became responsible for top management. A finance committee, made up predominantly of "outside" directors, had a final veto on policy and administrative decisions. The new management also revitalized the company's research and product diversification programs. Since 1931 the development of new products and the continuing integration of subsidiaries into the company's main operating structure has led to changes in old operating and staff divisions and to the creation of several new ones. On the whole, however, the basic administrative organization remains much as it was in the early 1930's.

The Goodyear Tire and Rubber Company, whose administrative story has been almost diametrically opposite to that of United States Rubber, had from its earliest days until very recently concentrated almost wholly on the tire business. In the early 1950's tires and tubes still accounted for more than 70 per cent of its income.²⁶ It is also a well-integrated firm, with large plantations in the Far East and Latin America, cotton plantations in the Southwest, textile mills, and close to 450 company-owned retail stores. Not only the nature of the business but also the make-up of its management has remained much the same over the past generation. It is still centralized, with functional vice-presidents exerting tight control over their departments. The vice-presidents in charge of the three major

²⁶ Aside from its annual reports, some information on Goodyear's organization can be found scattered in Paul W. Litchfield, *Industrial Voyage* (Garden City, New York, 1954). More useful was Hugh Allen, *The House of Goodyear* (Cleveland, 1949) especially chaps. 7 and 22. The percentage of sales revenue from tires and tubes is from Edward L. Allen, *Economics of American Manufacturing* (New York, 1952), 191.

departments, production, sales, and finance, and the president and the chairman of the board compose the policy-making and supervising executive committee. This busy group also appears to handle much of the necessary top level co-ordinating and integrating functions. The turnover in these key posts has been slow. Paul Litchfield, chairman of the board, for example, at eighty still plays an active role in the company which he has dominated for more than forty years.

Nevertheless, some significant changes have been made in Goodyear's administrative structure as a growing interest in product diversification has increased the complexity of its operations. The depression first turned the company's attention to developing more intensively its industrial product lines. As new items were put into production, the sales and accounting operations of the Industrial Goods Division were in 1938 moved out of Akron and placed with that division's manufacturing activities. The central staff and executive offices, however, maintained a fairly close control over the work of the division. The war finally convinced the firm's managers of the value of the non-tire business — a change which was symbolized by the opening of a large central research laboratory in May of 1943. In 1945 airfoam, flooring, pliofilm, pliolite and plastics, and other non-tire operations were put under a General Products Division, which was given control of the development, manufacture, and sale of these varied products. Shortly thereafter, the pliolite activities became separately managed by a similarly organized Chemical Products Division. The central staff and top executives still seem to have much to say about the day-to-day work of these non-tire divisions. It would appear to an outsider that since the product-oriented units have to be handled quite differently from the functionally defined tire departments, the central staff and executive officers in Akron may be under something of a strain.

The Firestone story parallels that of Goodyear in many ways, except that Firestone seems to have remained even more centralized. Until the depression, the family run Firestone firm produced little besides tires and closely related products.²⁷ Also, like Goodyear, it was thoroughly integrated, owning plantations, textile mills, and more than 700 retail establishments. Since the 1930's it has turned to making other products. As the output of these grew, manufacturing

²⁷ The annual reports of the Firestone Tire and Rubber Company have very little about organization. There is a bit more in Alfred Lief, *The Firestone Story* (New York, 1951), especially pp. 243-49, 342-45; the issues of *Business Week* (Oct. 28, 1950), 65-67, and (July 4, 1953), 60, were helpful.

expanded and became increasingly decentralized in various product units. After the Second World War these included Firestone Industrial Products Company, Firestone Steel Products Company, Firestone Plastic Companies, and the Firestone Chemical Company. Sales, however, remain carefully controlled by the central offices in Akron. So, too, have been the company's research and developmental activities. The top management group, which includes the major functional vice-presidents, still closely supervises all levels of the company's business. Moreover these executives, older on the average even than Goodyear's, have, with the Firestone brothers, managed the firm for close to a generation.

The B. F. Goodrich Company has been more diversified and more decentralized than Firestone and Goodyear. As early as 1929 its annual reports referred to the "long-held policy of diversification in the manufacturing and sale of rubber articles, believing it good business not to have too large a percentage of the total volume in any one class of commodities."²⁸ Nor, until the past year or so, did Goodrich bother to integrate vertically through the purchase of rubber plantations. Its major problem, then, was to co-ordinate and supervise the different manufacturing and selling operations. To do this more effectively, its plant and over-all organization were carefully studied in the late 1920's, at the same time United States Rubber was going through its major reorganization. By 1930 there were four somewhat autonomous product divisions (tire, mechanical, footwear, and sundries), each headed by a vice-president. Top level supervision, policy-making, and some co-ordination appear to have been carried out by three generalists, the president and the chairman and vice-chairman of the board, who were aided by the divisional vice-presidents and the treasurer and comptroller. Because it did not raise its own rubber, Goodrich's purchasing remained centralized. During the 1930's, under the pressures created by the depression, control by the central office, particularly over sales, increased. The tire and industrial products divisions and possibly the "sundries" division were divided into separate manufacturing and sales organizations. The Hood footwear division, however, seems to have continued to enjoy a large amount of autonomy, as did the new Chemical Division created shortly after World War II. The managers of the major manufacturing and merchandising divisions, however, in the postwar years still relied directly on central headquar-

²⁸ The annual report of the B. F. Goodrich Company for 1929, p. 4. Also useful were the annual reports for 1927, 1930, 1941, 1945; *Fortune*, Vol. 21 (June, 1940), 65 ff.; and *Business Week* (May 16, 1953), 140-42.

ters for all staff services and executive supervision. The top management group, which included more operating specialists than policy-making generalists, remained similar to that of a centralized organization.

The administrative strains generated by this partly centralized and partly decentralized structure were apparently the cause for a major administrative reorganization, which was completed in 1953. The annual report for that year described the organization of "two new major Divisions of the Company integrating sales, manufacturing, and the necessary staff functions. With the formation of the new Divisions the Company's operations were decentralized into six groups."²⁹ These groups included the Tire and Equipment, the Industrial Products, the Footwear and Flooring, the Chemical, the International, and the Canadian divisions. In the following year a Sponge Rubber Division was added. These divisions were in turn further divided into operating units defined by related products. "Corporate Staff Divisions," the 1953 report continued, "service, counsel, and render coordinating assistance to the Operating Divisions. This new organizational structure was adopted to further the continuing growth and diversification of the company's business. Through such decentralization of operations there is increasing opportunity for training and development of personnel needed for further expansion." By 1953, then, Goodrich had reached the same type of organization United States Rubber had achieved at least twenty years before.

The history of the leading rubber firms emphasizes the close relationship between the nature of a firm's business and its organizational structure. The sudden growth of the tire market caused firms which might have developed a variety of product lines based on rubber technology to concentrate on a single line of products. The United States Rubber Company, partly because it was one of the nation's largest business concerns before the tire revolutionized the industry, maintained large non-tire operations and a decentralized organization. Goodrich, which grew with the tire business and also tried to diversify production, developed a partly centralized and partly decentralized structure. Expansion and diversification after World War II finally brought it to a fully decentralized organization. In the postwar period diversification has also begun to have an effect on the centralized operations of Firestone and Goodyear.

²⁹ This and the following quotation are from the annual report of the B. F. Goodrich Company for 1953, p. 5. See also the annual report for 1952, p. 17, and 1954, p. 9.

They now seem to be approaching the type of compromise structure Goodrich employed until 1953.

Lessons from the Experience of the Multi-Industry Firms

A significant lesson suggested by the experience of Goodrich before 1953 and the electrical firms before 1950 is that a partly centralized, partly decentralized structure creates major administrative problems. The reason seems to be because the role and function of the top managers and the headquarters staff are not the same for a centralized as for a decentralized organization. In the large centralized firm the staff is more concerned with co-ordinating and inspecting the work of the different departments and less with providing specialized services and advice.³⁰ In a concern decentralized along product lines the major integrating and inspection functions are performed by the division staffs. This allows the central staff to focus on providing services and advice, particularly in the fields of merchandising and production, which in the centralized firm are under the virtually complete control of operating departments. The staff in a decentralized company still has an important role in co-ordinating the activities of the different divisions, but it does this purely on an advisory basis, acting as a channel of communication between the different operating units and between each unit and the central management office.

The top executive officers in the centralized organization often are, like the staff, concerned chiefly with day-to-day operations. Most of the top management group are heads of functional departments, and as such must focus most of their attention on the executive supervision of their specialized units. They have comparatively little time for top level interdepartmental co-ordination and almost no time for over-all company policy planning and formulation. In a decentralized concern such day-to-day operations are left to the division managers who, with their own large staffs, are responsible for the financial performance of their divisions. Supervision for the top executives at headquarters then means largely the evaluation of this performance through information provided by the staff and the initiation of executive action based on such evaluations. Since top level co-ordination is less demanding in a decentralized than in a

³⁰ I am using these terms — advisory, service, co-ordination, and inspection — as they are defined in William R. Spiegel and Joseph K. Bailey, "The Staff Function in Organization," *Advanced Management*, Vol. 17 (March, 1952), 2-6. Also informative on this point is J. K. Loudon "Line and Staff — Their Roles in Organization Structure," *Advanced Management*, Vol. 14 (June, 1949), 76-82.

single product, integrated, centralized concern, the major function of the top managers can become the making of over-all, long-range policy. Moreover, in carrying out this role they can rely on expert advice and data from the central staff.

It would appear, therefore, that when a firm like Goodyear, Dow, Eastman, or even Firestone attempts, as Goodrich and the electrical companies did before their recent reorganizations, to compromise between these two types of structures, administrative difficulties would result. For in such a compromise situation both the top management and the central staff would have somewhat ambiguous and occasionally conflicting roles to play. It would further seem that, where a choice existed, the decentralized organization, which so clearly differentiates between the duties of the specialists and the policy-making and operating generalists, would be patently preferable to the centralized type of structure.

Of the sixteen firms studied in the chemical, electrical, automotive, and rubber industries, twelve have come since 1921 to such a decentralized structure. Eight of these have done so since 1940. In all cases the new organization came as a response to the growing complexity of the firm's business. Except for Ford and Chrysler, that complexity resulted more from increasing diversity than from growth in size of business. The other four companies appear to be moving toward this same type of organization, and are doing so for much the same reasons. It may be safe to conclude, then, that once a firm develops more than a few closely related products for somewhat similar markets, the centralized type of functionally oriented organization becomes obsolete. The experience of the leading oil, steel, and non-ferrous materials firms seems to validate this proposition by emphasizing the other side of the coin, namely, that as long as a firm concentrates on a single line of goods, decentralization through the creation of autonomous product divisions may be impractical.

THE SINGLE-INDUSTRY FIRMS

The large oil, steel, and non-ferrous materials firms have historically been much less interested in diversification of products and much more concerned with vertical integration than the leading chemical, electrical, and even automotive firms. Because of this concern for integration and concentration on a single line of products, they have remained more centralized than the firms already studied. When they have decentralized they have usually done so

on functional and regional rather than on product lines. In the steel industry the large firms remained the most centralized, while there was some decentralization among the non-ferrous materials firms and much more in the leading oil companies.

The Oil Companies

The history of the large oil firms emphasizes particularly the close relation between the nature of the business, the degree of integration, and organizational structure. During the 1920's the leading oil companies were bent on expanding output and becoming, chiefly through purchase, fully integrated, self-sufficient firms.³¹ The dissolution of the Standard Oil Company (New Jersey) in 1911, the opening up of vast new oil fields, and the enormous new demand for petroleum products created by the automobile led to the formation of many new oil firms. Most of those formerly a part of the old Standard Oil group (in the top fifty in 1948, these included the Standard Oil Company [New Jersey], the Standard Oil Company [Indiana], the Standard Oil Company of California, the Socony-Vacuum Oil Company, Inc., and the Atlantic Refining Company) possessed more manufacturing and marketing than producing facilities. Companies formed in the Southwest (they included in the top fifty, Gulf Oil Corporation, Sinclair Oil Corporation, the Texas Corporation, and Phillips Petroleum) were primarily producing firms. So, during the 1920's one important group of companies was busy buying or developing producing properties, while a second group was purchasing and forming refining and marketing units. One other oil firm included in the first fifty American industrials was the Shell Oil Company, established in 1922 as a combination of Royal Dutch Shell and the Union Oil Company. Shell paid somewhat more attention, as it rapidly grew, to augmenting its refining and marketing facilities than to expanding its producing properties.

Although vertical integration continued after 1930, most of these oil companies had by then begun to achieve a fair balance between their production, processing, and marketing operations. In the 1930's further purchases were inhibited by the business difficulties growing out of the depression and an overproduction of oil. These conditions also encouraged mergers among the large companies. One result of mergers and the slowing down of property purchasing was that the leading oil firms turned their attention to rationalizing

³¹ These very general trends are indicated by the annual reports of the large oil companies and are analyzed in part in John G. McLean and Robert W. Haigh, *The Growth of Integrated Oil Companies* (Boston, 1954).

their operating and administrative organizations. This was first begun by Gulf in 1931, by Standard Oil (Indiana) and by Phillips Petroleum in 1932, by the Texas Corporation in 1933, by Socony-Vacuum in 1934, and by Sinclair, Standard Oil of California, and Shell Oil in 1936.³² Atlantic Refining did not undergo a comparable reorganization until 1949, after it had completed a major program of expansion and integration.

These reorganizations followed a general pattern. The operating units were reshuffled so that the units carrying on the same functions — production, transportation, refining, and marketing — were placed under a single division or subsidiary. Occasionally two subsidiaries carried on the same function in different geographical areas. Also, most large oil firms had a natural gas unit. At the same time separate organizations, usually subsidiaries, were formed to handle such basic services as exploration, research, and development. Gulf, under the guidance of a new president, James Frank Drake, gave the functional unit managers wide autonomy and made them fully responsible for the financial performance of their divisions. After the war the divisions themselves were increasingly decentralized. Gulf's marketing division, for example, was divided into separate, semiautonomous units for retail and direct sales. Each of these is divided according to five different types of markets. Socony, Indiana Standard, and apparently Phillips and California Standard developed similar types of functionally decentralized or-

³² The information on the administrative developments of the ten oil companies studied here came primarily from their annual reports. However, the information in these reports was often so limited that it had to be supplemented by referring to *Moody's Industrial Manual*. Because of the paucity of information, the generalizations made here are necessarily imprecise.

Additional data on Standard Oil Company (Indiana) came from Paul H. Giddens, *Standard Oil Company (Indiana): Oil Pioneer of the Middle West* (New York, 1955), especially chap. 17 and pp. 636-41; on Sinclair Oil Corporation from *Fortune*, Vol. 6 (Nov., 1932), 56 ff.; Vol. 53 (April, 1956), 117 ff.; on the Texas Corporation from *A Statement to the Stockholders of the Texas Corporation from R. C. Holmes, a Director and Former President* (n.p., c. 1933), and a printed "Letter of the Stockholders" signed by eight directors of the Texas Corporation dated Dec. 20, 1933; on Socony-Vacuum Oil Company from *Fortune*, Vol. 26 (Nov., 1942), 111 ff.; Vol. 27 (Feb., 1943), 117; on Gulf Oil Corporation from *Fortune*, Vol. 16 (Oct., 1937), 79 ff.; Vol. 49 (Feb., 1954), 132; *Business Week* (Oct. 8, 1949), 64-68; Sidney A. Swensrud, "Gulf Oil," *The First Fifty Years, 1901-1951*, Newcomen Society of North America (1951), 21-23; Craig Thompson, *Since Spindletop* (n.p., n.d.), 51-54; on Shell Oil from *Fortune*, Vol. 6 (Oct., 1932), 33 ff.; on Phillips Petroleum Company from *Fortune*, Vol. 50 (Aug., 1954), 73 ff.; and on the Atlantic Refining Company, from *Fortune*, Vol. 48 (Aug., 1953), 128.

ganizations. So, too, did the Sinclair Oil Corporation after Percy Spencer took Harry F. Sinclair's place as president in 1949.

In these functionally decentralized oil firms co-ordination of the operating units was handled to some extent by interdivisional committees and still more by the central staff. Co-ordination, in fact, appeared to be an even more important function of the staff than providing services and advice. Top management, a small group of generalists, concentrated on evaluating the performance of the divisions and on deciding over-all company policy. There seems to have been much less decentralization of operational authority and responsibility in Shell, Texaco, and Atlantic Refining than in other oil firms studied here, although the available evidence is not clear on this point.

Since the depression Socony, Indiana, and California Standard have been shifting from a functionally defined, decentralized organization to one based on regionally oriented, fully integrated operating units. In so doing they are coming closer to the management structure which the largest of them all, Standard Oil Company (New Jersey), created in 1927. The pattern is just beginning to emerge in Socony-Vacuum. Since World War II that firm has added refining and, apparently, marketing facilities to its two large producing subsidiaries, Magnolia in Texas and General Petroleum in California. At the same time its East Coast refining and marketing units, by obtaining their crude from foreign subsidiaries, have lost their close business connections with the California and Texas subsidiaries. It would seem that in time three autonomous regional units might be formed.

The pattern becomes more clear in the case of the Standard Oil Company (Indiana).³³ After the mid-thirties Indiana Standard refined and marketed in the Midwest using crude oil produced, purchased, and transported by its Stanolind group of subsidiaries. In the South its refining and marketing were done by its Pan-American subsidiaries, while in the mountain states the Utah Oil Company handled marketing. Before 1940 Pan-American had become more of an integrated unit by developing its own production activities. Since the war, expansion, particularly in the East, led to further administrative changes which culminated in a reorganization in 1954. The American Oil Company then became the subsidiary which unified the Indiana company's operations both in the South and East. In the East, American Oil refined and marketed, receiving

³³ See particularly the annual reports of the Standard Oil Company (Indiana) for 1933, p. 4; for 1934, p. 6; for 1937, p. 5; and for 1954, p. 8.

its crude from its own production subsidiaries in the South and Southwest. These same subsidiaries, which retained the name of Pan-American, did American's transporting, refining, and marketing in the Gulf and South Central states. The next step might well be a closer integration of operations in the Middle and Northwest by putting the Stanolind producing and the parent company's refining and marketing organizations under one management. Then the parent company could divorce itself completely from day-to-day management and concentrate on top level problems.

This is just about the type of organization that California Standard had evolved by 1955. In the 1920's Standard Oil of California was a well-integrated company whose markets and sources of supply in its home territory, the West Coast, were both rapidly growing. As it expanded production and marketing outside of California, the company had to make adjustments in its management structure. In 1937 it placed all its operations (producing, refining, and marketing) in Texas and New Mexico under the Standard Oil Company of Texas. In 1941 it did the same thing in the Canadian Northwest with the Standard Oil Company of British Columbia. At the same time the management of these two units and that of the California Company, a subsidiary which carried on domestic production outside of California, was further decentralized "by the creation of separate managing boards with headquarters located in the areas of the principal operations." "This plan of management organization," the 1941 annual report continued, "was designed to develop initiative in field management by placing responsibility for decisions with them, thus minimizing duplications and freeing major executives of the parent company for constructive planning, policy formulation, and the exercise of over-all control."³⁴

The war and postwar expansion led to further administrative changes. Another integrated unit, Palotex, has been set up to handle operations in Oklahoma. The California Company not only enlarged its production activities but developed extensive marketing operations particularly in the East. So effective have these operations been, that a new subsidiary, the California Oil Company, was formed to build and run refineries and handle marketing on the East Coast. Finally, in 1954, the top management group divorced itself from specific operational duties by forming the Western Division, which became responsible for all exploring, producing, transportation, refining, and marketing activities in seven western states, Alaska, and

³⁴ The annual report of the Standard Oil Company of California for 1941, p. 18.

Hawaii. "The Division has its own management," explains the 1954 report, "which reports to the Parent Corporation. In the latter executive functions have been reorganized to the end that more time and effort may be directed to increasingly complex national and international problems."³⁵ A next step might be the formation of an integrated "Eastern Division" combining the California Company and the California Oil Company.

The management structure of the Standard Oil of California has evolved many similarities to that which Standard Oil (New Jersey) formed almost thirty years ago. In the mid-twenties the Jersey Company was organized much in the way the Indiana and California companies were before 1954; that is, the parent company also carried on major refining and marketing operations as well as supervising a number of functionally oriented or regionally defined subsidiaries. During the 1920's top management became increasingly aware of the need for creating a more effective central unit. Co-ordination between its operating units was becoming more and more difficult and little or no time was available for over-all company supervision and policy planning. Therefore, "in the interest of efficiency," the annual report for 1927 recorded, "the various major departments of the business have been segregated into different companies, each having its own executives upon whom devolve the entire management and control of their departments."³⁶ The most important of the newly formed subsidiaries was the Standard Oil Company of New Jersey (Esso), incorporated in Delaware, which took over the refining and marketing activities of the parent company and control of the Carter Oil Company, the largest producing subsidiary, and of other production and pipeline units. The organization of Jersey's other major domestic integrated subsidiary, the Humble Oil Company, remained about the same. Meanwhile, the Standard Shipping Company was formed to operate marine shipping; the Standard Oil Development Company became the central research and development unit; and Stanco, Inc., was created to operate a number of specialized petroleum products concerns. In the following years new service and product subsidiaries were formed and old ones re-formed. Today, Carter has its own marketing and refining units in the Central and Rocky Mountain states;

³⁵ The annual report of the Standard Oil Company of California for 1954, p. 4; also the annual report for 1952, p. 3.

³⁶ The annual report of the Standard Oil Company (N. J.) for 1927, pp. 9-10. See also the annual report for 1929, p. 8; for 1936, pp. 3, 6; *Fortune*, Vol. 21 (April, 1940), 49 ff.; Vol. 21 (June, 1940), 61 ff.; Vol. 44 (Oct., 1951), 98 ff.

Esso confines its selling activities to the eastern seaboard and southern states; Humble markets in Texas and New Mexico. Since 1927 these operating units appear to have been increasingly decentralized along functional and regional lines.

With the operations of its subsidiaries more carefully defined by this 1927 reorganization, the functions of the parent company, the Standard Oil Company (N. J.), became specifically those of coordination, supervision, and policy-making. Its directors, all full-time company officials with no operating responsibilities, concentrated on executive supervision through statistical, accounting, and budgetary controls and upon over-all, often long-term, policy formulation. Its staff headed by six "co-ordinators" handled, as their title indicates, the major co-ordinating activities. The men who headed the six major functionally defined departments — production, refining, pipelines, marine transport, marketing, and economics — and the other staff specialists, played a role somewhat like their counterparts in the large chemical and electrical firms, acting as a channel of communication between the different units and top managements and providing both with specialized services and advice. Since 1927 at least one major change has been made in the organization of this top management group. That came in 1933 when many supervisory and policy-making functions were given to a small five-man committee. Other changes instituted after a thorough analysis the company made of its organization during the early 1940's caused apparently only minor readjustments in the basic administration structure. Possibly this structure, created a generation ago by Walter Teagle and his staff, was used as a model for the recent reorganization of Standard of California's central unit and will be used again in the future for similar changes in Standard of Indiana and Socony-Vacuum.

Besides rapid growth, the recent development of petrochemicals may lead to a further decentralization of operations in the large oil firms. Nearly all the major oil companies have formed or greatly enlarged their chemical production since World War II.³⁷ Of the ten companies studied here, only Socony has not gone into chemicals. It has, instead, concentrated its research and development on nuclear power. The organizational responses of the other nine companies to chemical production cover a wide spectrum. Gulf and Texaco, looking upon the chemical business primarily as an investment and as a market for their petroleum and natural gas

³⁷ The information for this paragraph comes from annual reports of these companies since World War II.

products, have joined with other companies to set up subsidiaries which are almost completely outside their management structure. Gulf, for example, formed in 1952 with the B. F. Goodrich Company the Gulf-Goodrich Chemical Corporation, each company owning 50 per cent. The Texas Corporation owns 50 per cent of the Jefferson Chemical Company and 49 per cent of the Coltex Corporation. On the other hand, Shell, which has been in the chemical business for more than twenty-five years, runs its chemical manufacturing and marketing business through a wholly owned subsidiary whose manager reports directly to the top management of the oil firm. Both Standard of California and Standard Oil (N. J.), who have been active in chemicals for many years, have created a number of subsidiaries, which handle both the manufacturing and marketing of the different products. These subsidiaries are supervised by the parent companies' top management teams.

At the other end of the spectrum is Atlantic Refining. Although this company has been increasing its chemical output, such products are still manufactured and sold by the company's regular refining and marketing departments. This is the way it was first done in Sinclair and in Standard of Indiana. Then Sinclair in 1951 and the Indiana Company in 1952 formed a separate subsidiary for the sale and development of petrochemical lines. In both cases parent company refining units continue to manufacture the products which the chemical subsidiary sells. In Phillips, however, the process has gone a step further.³⁸ The chemical subsidiary, formed in 1948, was in 1952 given control over manufacturing as well as sales. It was then subdivided administratively along product lines. This change so increased the complexity of top level co-ordination and supervision that a separate Co-ordination Department was created. If, as Phillips' president anticipates, chemical operations will before long make up 50 per cent of the company's business, further changes in organizational structure seem certain. In fact, as the oil firms develop new lines of products based on a broader petroleum technology, they may turn more to decentralized operations along product as well as functional and regional lines. Such changes will, in turn, demand that increasing attention be paid to the organization and duties of the central staff and executive units.

³⁸ See particularly *Fortune*, Vol. 50 (Aug., 1954), 73, 120-24; and *Business Week* (Dec. 31, 1949), 22-24.

The Steel Companies

A comparison between growth and administrative developments in the oil and steel industry is instructive. In steel, expansion has been slower and more conservative. So too have been efforts at product diversification and administrative innovation. Like any other study of the steel industry, this one falls into two parts, the story of the independents and the story of the Corporation. The story of the former focuses on relative growth, on integration, and on centralization. That of the United States Steel Corporation concerns relative decline and constant administrative difficulties.

Of the independents the Bethlehem Steel Corporation, created by dynamic Charles M. Schwab, grew most rapidly, with its greatest expansion occurring during the ten years after 1913.³⁹ By 1923 the company was well integrated, owning ore, coal and coke properties and some of the most efficient steel-making and fabricating plants in the nation. During the 1920's Schwab's hand-picked successor, Eugene Grace, rationalized the firm's many new properties and then in 1930 and 1931 purchased more structural steel fabrication plants on both the West and East Coasts. Grace, who in 1955 was still chairman of the board, kept a tight control over all aspects of the company's operations.

The expansion of the second largest independent, the Republic Steel Corporation, began in 1927 when the Cleveland financier Cyrus Eaton gained control of the firm. A rapid growth through mergers and purchases was temporarily stopped in the earlier 1930's by president Tom Girdler, partly because of the depression, but also because of the need for systematizing and simplifying the company's operational, administrative, and corporate structure. After this had been begun and after the worst of the depression passed, Republic began again to buy steel properties. The final reorganization, the 1937 report recorded, "coordinates operations and sales in the product divisions."⁴⁰ However, the division managers do not seem to have had autonomy, authority, or responsibility comparable to that possessed by heads of operating units in chemical or oil firms. From the available information it would seem that Girdler, who in

³⁹ There is a brief summary of Bethlehem's history in Gertrude G. Schroeder, *The Growth of the Major Steel Companies* (Baltimore, 1953), 46-51. There is some additional information in the company's annual reports and a good bit more in *Fortune*, Vol. 23 (April, 1941), 61 ff.; Vol. 47 (March, 1953), 101 ff.

⁴⁰ The annual report of the Republic Steel Corporation for 1937, p. 4. Besides its annual reports and Schroeder, *Growth of the Major Steel Companies*, pp. 51-53, *Fortune*, Vol. 8 (Sept., 1933), 52 ff., provides some data.

1955 was still board chairman, and his functional vice-presidents made the major operational as well as policy decisions.

The two other large steel independents on the list of the nation's top fifty industrial firms have not had Republic's and Bethlehem's predilection for expansion. The Jones and Laughlin Steel Corporation, a tightly held family firm which has confined itself almost exclusively to the Pittsburgh district, has made almost no purchases of property in this century. Its impressive increase in output has come from expanding its own plant facilities.⁴¹ The National Steel Corporation also has done little buying since its formation as a merger in 1929 of two old established firms, Weirton Steel Corporation and the M. A. Hanna Ore Company, and the more recently founded Great Lakes Steel Corporation.⁴²

Except for National Steel, the independents have had from the beginning highly centralized, functionally departmentalized management structures similar to that of the typical American industrial firm before 1920. Since the depression major administrative developments have been an enlargement of existing staff departments and the addition of new ones such as research, labor relations, and public relations. Since World War II, appointments of executive vice-presidents have enlarged the top management groups. But both the central staff and the executive office have retained a close supervision over operations.

Even National Steel now seems to be developing a similar type of organization. After its formation it long remained a loose federation of the three constituent companies, with over-all co-ordination and policy-making being carried out by a small central staff and an executive committee that included chairman Ernest T. Weir and the heads of the three major operating units. With the departure of two of these, George M. Humphrey and George R. Fink, who long managed the Cleveland and Detroit units respectively, and with the revelation of operating and managerial inefficiencies at Detroit, the company has recently gone through an important reorganization. One result of this has been to increase the size and authority of the central staff and executive offices.

Despite the growth of the independents, the United States Steel

⁴¹ There is very little information in the company's annual reports. Schroeder, *Growth of the Major Steel Companies*, pp. 54-55, 59, has some data as does *Newsweek*, Vol. 38 (Nov. 12, 1951), 78; and Vol. 39 (Feb. 11, 1952), 66.

⁴² Besides the company's annual reports and Schroeder, *Growth of the Major Steel Companies*, pp. 59-60, see *Fortune*, Vol. 3 (June, 1932), 30 ff.; Vol. 35 (May, 1947), 219. The recent changes are mentioned in the annual report of the National Steel Corporation for 1954, list of officers and pp. 8-9.

Corporation is still today much larger than any of its competitors. From the first, its major administrative problems have arisen from its size and, for a steel firm, the comparative diversity of its products. The problem of integrating, co-ordinating, and effectively supervising its varied and overlapping activities, however, little troubled the Gary administration which dominated the company for a quarter of a century. To Judge Gary and his few fellow top executives a holding company had few functions besides maintaining control over the price and output policies of its subsidiaries.

After Gary's death in 1927 serious attention was for the first time given to the corporation's operating and management structures. Gary's successor, Myron C. Taylor, began by ordering a thorough study to be made of how the company might best stop the continuing loss of its markets to competitors, adjust to the rapidly changing nature of its markets, and make the most of new technological advances, especially those in the processing of light steels and alloys.⁴³ Next came the overhauling of the company's physical equipment. Many plants were scrapped; in others production was reoriented towards new markets and new areas. Facilities were purchased on the West Coast and elsewhere and some new plants were built. At the same time improved marketing, production, and control methods were examined and adopted, while product and fundamental research was intensified.

Finally, although the depression and the attempts at recovery had slowed its adoption, Taylor created a new corporate and administrative structure. Many of the major subsidiaries were combined (as, for example, were the Illinois Steel Company, Carnegie Steel, and the American Sheet and Tin Plate), while others were re-formed or eliminated. The principal new operating units included three integrated, regionally oriented, steel-making divisions (Carnegie-Illinois centering on Pittsburgh and Chicago; the Tennessee Coal, Iron and Railroad based at Birmingham; and Columbia

⁴³ The story of this mammoth reorganization is best summarized by Taylor himself in *Annual Meeting of the Stockholders of the United States Steel Corporation*. April 6, 1938. *Remarks of Myron C. Taylor* (New York, 1938), pp. 8-22. Also useful were the annual reports of the United States Steel Corporation for 1935, pp. 11-12; for 1936, pp. 12-13; for 1937, p. 15. The story of Gary's administration has been told many times in many different ways. The role played by the central unit is, however, fairly clear from the annual reports. A good brief evaluation of the corporation's management before and after the final reorganization can be found in *Fortune*, Vol. 13 (March, 1936), 59 ff.; Vol. 13 (June, 1936), 113 ff.; and Vol. 21 (March, 1940), 64 ff. Schroeder, *Growth of the Major Steel Companies*, pp. 37-39, 43-46, adds some interesting information and figures on operations.

Steel on the West Coast). Other major units included subsidiaries which manufactured heavy steel products such as bridges, ships, structural shapes, oil well supplies, and wire, together with the older mining, coke, transportation, and cement-making subsidiaries. In most cases the managers of these units were given a large amount of autonomy including, apparently, financial responsibility.

To help assist in the supervision and co-ordination of these many units Taylor late in 1937 formed United States Steel of Delaware. This new company set up headquarters in Pittsburgh rather than in New York, where the parent company continued to maintain its offices. The Pittsburgh headquarters included a large central staff departmentalized by functions. Here the senior staff officers, the heads of the major subsidiaries, and the company's top officers conferred regularly to supervise operations. These executives carried out their supervising role and the staff its co-ordinating and service functions through "supervisory contracts" made with the steel-making and raw-materials producing subsidiaries. The top policy-making team was the executive committee of the Delaware corporation, whose members were also the senior officers in the parent company. In Pittsburgh these men may have had time for over-all policy planning, but in New York they still had to supervise and co-ordinate the work of the non-steel-making units, including the railroads, ship-building, cement, and other subsidiaries with which the Delaware corporation had no supervisory contracts.

This decentralized organization failed to work as effectively for United States Steel as its counterpart did for Jersey Standard. The dual corporation setup was essentially a cumbersome one and the top executives must have been harassed by constant shuttling back and forth between New York and Pittsburgh, handling in each place problems of quite different management levels. Moreover, the units which did not have contracts with the Delaware company did not enjoy the benefits of the central's staff advice and service, nor did the top management have these same services in supervising such units. In any case another change came in 1950.

This reorganization was aimed at centralization.⁴⁴ The Delaware corporation was eliminated and a new operating subsidiary was formed. This new subsidiary, the United States Steel Company, combined the Carnegie-Illinois Company and the major coke and coal subsidiaries. Known as "Central Operations" it included over

⁴⁴ This reorganization is mentioned in the annual report of the United States Steel Corporation for 1950, p. 18, and analyzed in some detail in *Fortune*, Vol. 44 (Jan., 1956), 89 ff.

two-thirds of the corporation's basic steel-making capacity. It was organized along highly centralized lines, with the old Delaware executive and staff officers exercising a tight control over the operating departments. At the same time, according to *Fortune*, the top line and staff officers were given increased control over the divisions not under "Central Operations," including the regional, product, and transportation subsidiaries. Most of these divisions retained their research, sales, and purchasing departments, but the central staff officers became the heads of these divisional departments and visited the divisions often between the regularly scheduled monthly meetings of the Pittsburgh and the divisional executives. Pittsburgh also handled their labor and public relations, and had direct control over co-ordination of research, purchases, and sales. Top management, too, became more directly concerned with operations. All divisions, for example, must obtain permission from the New York headquarters before making any capital expenditures over \$25,000. This centralization has meant an extensive enlargement of the already large staff and executive offices. Such a structure, moreover, suggests the possibility that the Executive Policy Committee, top management unit of the corporation, could become so engrossed in supervisory activities as to have comparatively little time for long-range planning or even for more immediate policy formulation.

The experience of both United States Steel and the independents would seem to suggest that steel making does not readily lend itself to decentralization, not even functional decentralization. This may be because steel companies manufacture much less for the mass consumer market than do the chemical, electrical, automotive, rubber, and even the oil firms. The steel companies must turn out products specifically tailored to their large individual customers' specifications, and marketing must be closely integrated with production. Moreover, steel manufacturing would seem to require close central control to assure the most effective flow of materials from mine to market. Even so, centralization would appear to create as many, if not more, problems than it solves.

Non-Ferrous Materials Companies

In very general terms the growth and administrative changes in the large non-ferrous materials companies have been similar to those in the leading steel and oil firms. Prior to the depression the emphasis was on integration. During the 1930's and 1940's the managers of the non-ferrous firms paid attention to systematizing over-all

management. However, less concentrated thought appears to have been given to administration than was the case in the oil or even the steel industries. This seems to have been because of the lack of competitive pressures. Because of the comparatively limited competition among the non-ferrous materials firms, the holding company remained longer here than in any other industry an instrument of price and production control rather than the essential co-ordinating, supervising, and policy-making unit of a large industrial complex.

The success of Kennecott Copper Corporation in developing an effective over-all administrative structure may be partly attributed to the fact that it was a late comer to the copper business. Kennecott, organized in 1915, remained primarily a mining company until the late 1920's when it purchased a large fabricating organization, the Chase Brass and Copper Companies.⁴⁵ The depression helped turn the attention of E. T. Stannard, who became its president in 1933, to the problems of diversification and administration. The company began to go into oil, gold, and titanium mining, with only the last-named proving relatively successful. In 1935 it increased the number of its finished products by buying the American Electrical Works. The need for effective integration and co-ordination of these different operations led to increasing centralization. As the firm's comparatively small refining and smelting works were located close to the mines, regionally defined operating divisions were set up in the West. Their managers reported directly to D. C. Jackling, the managing director in charge of mining. A separate management unit for the Chilean operations was given more autonomy than the domestic divisions. Responsibility for sales of finished goods was taken from the fabricating units and given to the sales department, set up in the New York headquarters office. For better co-ordination, Stannard created at headquarters a central purchasing and traffic department, as well as departments for research and development and for exploration. Top supervision was handled by Stannard and Jackling, assisted by the staff department heads at headquarters. Except for the creation of a Titanium Division, this organization remained about the same until the death of Stannard and two vice-presidents in an airplane crash in 1949.

The new president, Charles Cox, has followed a policy of decentralization. He gave the managers of the mining division and the heads of the fabricating units more authority and responsibility.

⁴⁵ The Kennecott story comes from the company's annual reports and from *Fortune*, Vol. 44 (Nov., 1951), 84 ff.

The latter were made responsible for sales as well as production. Apparently all are accountable for the financial performance of their respective units. Secondly, Cox increased the size of the central advisory and service staff, enlarging the research department and practically starting from scratch the engineering, public relations, and labor relations departments. At the same time he added to the executive office. Advised by this office and the heads of the staff departments and assisted by J. C. Kenner, vice-president in charge of operations, and R. C. Diehl, president of Chase Brass, Cox now carries out top level supervision and makes policy for this integrated and decentralized copper firm.

Cox's achievements become more significant when they are contrasted to the administrative developments within the nation's largest copper company. The Anaconda Mining Company, the old copper trust founded in 1895, began a rapid expansion in 1914 when the outbreak of war skyrocketed the demand for copper. During the war years it purchased large mining, smelting, and refining properties in Montana, Arizona, Chile, and Mexico and also acquired refining works in New Jersey.⁴⁶ Finally, in 1922, it rounded out the organization by purchase of the American Brass Company, itself a product of the great merger movement at the turn of the century. The only other major corporate addition was the formation of the Anaconda Wire and Cable Company in 1929 and 1930.

The major Anaconda subsidiaries have always remained almost independent units. Cornelius F. Kelley, who, either as president or board chairman, dominated the company's affairs from 1918 to 1955, considered the primary role of the central office to be that of establishing price and production policy. Like Judge Gary, he troubled himself little with improving the co-ordination of and supervision over the different operating units. Nor was he seriously concerned with product development and diversification, although he did set up a central metallurgical research department. He also after 1934 caused purchasing and sales for non-fabricating units to be centralized in the Anaconda Sales Company. Aside from these functional departments, the company's headquarters have remained small. Even the great expansion of markets and production after the coming of the Second World War little affected the organization of this old-line holding company. Anaconda has not followed Kenecott's example in developing modern service departments. Top

⁴⁶ The information on Anaconda is from its annual reports and from *Fortune*, Vol. 14 (Dec., 1936), 83 ff.; Vol. 15 (Jan., 1937), 71 ff.; Vol. 51 (Jan., 1955), 89 ff.

level co-ordination and supervision is handled as it was a generation ago, by weekly meetings of the managers of the major operating subsidiaries and four senior policy-making executives. This organizational conservatism may have had something to do with the relatively slow growth of the company's income. Since 1939, *Fortune* reports, Anaconda's dollar revenue has gone up roughly 140 per cent, as compared to Kennecott's increase of 250 per cent and Phelps Dodge's rise of 290 per cent. The veteran top management, whose average age is close to seventy, should be retiring soon. When they do, a thorough administrative reorganization may be in order.

The administrative story of the International Nickel Company has many similarities to that of Anaconda, except that, since International has been less troubled by competition than the copper company, it has been under even less pressure to make organizational adjustments. International Nickel was formed in 1928 as a Canadian corporation after the collapse of a nickel cartel.⁴⁷ Since 1928 it has controlled a large share of the world's nickel production, which is concentrated in the Canadian province of Ontario. Almost immediately after its formation International purchased foundries and rolling mills in the United States and Britain. In 1936 it set up two distributing companies, one for the United States and one for Canada. It did not, however, go into the manufacture of finished goods as did the copper and aluminum companies.

International Nickel's headquarters on Wall Street have remained, like those of Anaconda and of United States Steel before 1927, relatively small. The central staff in the 1930's included little more than a research and development office and an "Information Bureau." Also like U.S. Steel before 1927 and Anaconda until 1955, its controlling executive committee was dominated by its chairman. Robert Crooks Stanley managed the concern almost single-handed from 1928 until his death in 1951. While chiefly concerned with setting price and production quotas, Stanley, more in the fashion of Gary than Kelley, kept a tight control over his subsidiaries. But his interest in technological improvements and product developments seems to have been even less than either of those two executives. To date there is little visible evidence that his successors are making any major change in the prevailing structure.

Until World War II, the Aluminum Company of America had as tight a grip on the aluminum trade as International Nickel has had in its industry. Alcoa, formed in 1888 as the Pittsburgh Reduction

⁴⁷ The data on International Nickel is from its annual reports and *Fortune*, Vol. 42 (Nov., 1950), 93 ff.

Company and financed by the Mellon family, concentrated much more than Nickel on the development and manufacture of fabricated and finished products.⁴⁸ This was particularly true after the automobile had enlarged the market for aluminum products. In the years after World War I it also completed the vertical integration of its operations, so that by the end of the 1920's it operated bauxite mines in the United States and the Guianas, four reduction and smelting plants, and eleven fabricating plants. The company's top executives, Arthur V. Davis (a founder, general manager until 1910, and president until 1928), Roy H. Hunt (son of the co-founder and president after Davis became chairman of the board), and Irving W. Wilson (who became vice-president in charge of production in 1931), created an efficiently operated, centralized organization whose departments were divided on functional lines.

World War II, by greatly altering Alcoa's business situation, had some impact on its organizational structure, but not as much as might be expected. Not only did the war greatly expand the demand for aluminum and lead to the development of many new types of aluminum products, but the government's policy in disposing of its aluminum plants provided Alcoa for the first time with real competition, in the form of the Reynolds Metals Company and the Kaiser Aluminum and Chemical Corporation. To meet the new situation, Alcoa enlarged its service departments, especially research, engineering, public relations, and its important Product Planning Division. The new emphasis given to marketing led to the creation of "industry managers" to co-ordinate the sales in each of the different major markets. The increasing emphasis on product planning and product marketing may in time bring about a decentralization of operations along product lines. However, no major administrative change seems likely until the retirement of the veterans, Davis, Hunt, and Wilson, who as chairman of the board, chairman of the executive committee, and president, respectively, still play a dominating role.

A fifth company, the International Paper Company, has been included here because of similarities to the non-ferrous metals firms in the nature of its business and its historical growth. The managers of International Paper, which was founded in 1898 during the merger movement at that period, remained until after the First

⁴⁸ These comments on Alcoa come from its annual reports and from *Fortune*, Vol. 1 (March, 1930), 68 ff.; Vol. 10 (Sept., 1934), 46; Vol. 33 (May, 1946), 103 ff.; and Vol. 52 (Oct., 1955), 114 ff. Charles C. Carr, *Alcoa, An American Enterprise* (New York, 1952) adds almost nothing.

World War largely concerned with regulation of price and production.⁴⁹ After the war the company expanded rapidly by going into the processing of newsprint in Canada, by buying and building plants in the South which made heavy paper, container board, and other "kraft" products, and by diversifying its production in the Northeast. The depression halted this expansion and, in fact, brought the company into serious financial difficulties in 1932. From that year until 1936 the company steadily lost money.

Under the aegis of a new president, Richard J. Cullen, International Paper went through a drastic reorganization somewhat similar to the kind United States Steel was going through at that same time and which United States Rubber had just been through. Old plants were eliminated, new ones started, and the company's administrative lines were radically redrawn. Three major product divisions were created, each managed by a vice-president who was given "full authority," which apparently included the responsibility for the financial performance of his divisions.⁵⁰ Newsprint operations were concentrated in the Canadian Division. The southern division handled all the "kraft products" operations, while the units located in the Northeast made up the "specialty division," which was in turn divided on product lines. The central staff and executive offices seem to have exercised considerable control in co-ordinating and supervising the operations of the specialty division, but did not oversee the Canadian and kraft divisions to a comparable degree. Top level co-ordination and supervision were carried out by the senior executive officers assisted by the heads of the three operating divisions and by the vice-president in charge of sales, whose main concern was with the specialty division. This structure, which seems to combine regional and functional decentralization quite successfully, has been little changed since the 1930's.

Summary: Decentralization in the Single-Industry Firms

This brief examination of the large oil, steel, and non-ferrous materials firms indicates how the growing complexity of operation affects over-all organization structure, particularly the form and function of the central administrative unit. Where the top executives considered that their work was merely to set price and production quotas, a small central staff and executive office was adequate.

⁴⁹ This information comes from a company publication, *International Paper Company, 1898-1948* (n.p., 1948), supplemented by company annual reports and *Fortune*, Vol. 1 (May, 1930), 65 ff.; Vol. 16 (Dec., 1937), 131 ff.

⁵⁰ The term "full authority" is used by *Fortune*, Vol. 16 (Dec., 1937), 131 ff.

But when the central office became the co-ordinating, supervising, and broad policy-making heart of the enterprise, then the duties and the size of the staff and top management increased rapidly. Such increasing administrative pressures on the central unit often led to some decentralization of operational decision-making. And, in the oil industry, functional decentralization appears to have been the most effective answer. However, three of the non-ferrous materials firms and all the steel firms are today still essentially centralized. Since most of these firms have been dominated by veteran, conservative managements, organizational change may have been retarded and decentralization may eventually be more widely adopted, although it would appear that of all the industries steel lends itself the least to a delegation of decision-making.

Finally, as in the oil industry, when operations became national and world-wide, the regionally defined, vertically integrated operating unit provided another kind of satisfactory operating organization. In such regionally as well as functionally decentralized firms, the central staff and executive offices began to play a role similar to that of the administrative centers in the large chemical, electrical, automotive, and rubber companies, whose operations had become complex as a result of product diversification. Thus, while there has been increasing decentralization in the single-industry firms, it has been motivated by somewhat different reasons than in the multi-industry firms and has resulted in somewhat different structural forms.

THE MARKET-ORIENTED FIRMS

In the distributing, food, and stimulant industries the operations of the leading firms are usually less complicated than those of non-ferrous materials, steel, oil, rubber, automotive, electrical, and chemical companies. Nevertheless, the administrative story of this last group of companies reiterates the lessons demonstrated by the experience of the firms already studied. Where the leading companies in these three trades have continued to stick to one line of products or to one particular function such as retail marketing, their over-all structure has remained centralized. Where their business has become more complex, either through development of new lines of products or new types of functions, they have in many cases, but certainly not in all, decentralized.

The Distribution Companies

Consider, for example, the experience of the four leading distributing firms. The over-all administrative structures of two top retail firms, J. C. Penney and F. W. Woolworth, have remained essentially centralized, while Sears Roebuck, after adding retailing to its wholesaling operations, began to decentralize. On the other hand, Sears' great rival Montgomery Ward remained highly centralized, even after it went into retailing.

A major administrative problem of the retail chain store has been the development of an efficient central unit. The very nature of the business makes it easy and sensible to leave a large number of decisions to the store managers. One of the very first steps J. C. Penney took after he had combined a number of retail stores in the western mountain states was to set up a central purchasing office in New York.⁶¹ Three years later, in 1917, he added a central personnel department. After the company's major expansion between 1927 and 1929 the central offices (which by then included sales, advertising, real estate, and research and testing departments) were enlarged. At the same time more effective accounting controls were instituted by the treasurer's department. With this expansion the number of district managers, the essential link between the central office and the individual stores, grew and their duties became more clearly defined.

Penney, who always preached the doctrine of local decision-making and responsibility, continued to allow his store managers a good deal of autonomy. While the central office did the purchasing, laid out advertising, established hiring, firing, and promotion policies and practices, the managers of the individual stores selected their own merchandise, adapted advertising to their own needs, set their own advertising budget, hired, trained, and promoted their own personnel and were consulted on changes in the layout or location of their store. Because of this autonomy and because the nature of the company's business is comparatively uncomplicated, Penney's top executives have relatively little to distract them from top level supervision and policy-making. The top management group, which has remained small, includes Mr. Penney himself, as chairman of the board, the president, and the treasurer, assisted by the heads of the central departments. Thus, although J. C. Penney has an essen-

⁶¹ The data in this paragraph come from Norman Beasley, *Main Street Merchant: the Story of J. C. Penney Company* (New York, 1948), supplemented by the annual reports of the company and by *Fortune*, Vol. 42 (Sept., 1950), 101 ff.

tially centralized operating structure — that is, there is only one set of executive and staff offices in the company — decision-making has been widely decentralized.

The F. W. Woolworth Company has historically centralized decision-making somewhat more than J. C. Penney.⁵² Because Woolworth had an earlier start — the amalgamation in 1911 of twelve small chains marks its real beginning — it built up its central buying, sales, and financial departments sooner than its leading competitor. On the other hand, its personnel and real estate departments apparently received less attention, at least until after World War II. Woolworth, however, differed from Penney primarily in the larger authority and control it gave its regional managers. These district managers (there were eleven by 1939) had bigger staff and office forces than Penney's regional executives and kept a tighter control over the store managers, both through personal checking and by accounting devices. More operational decisions also seem to have been made in the New York office, where a small number of veteran senior executives and central department heads meet regularly as an over-all supervisory and policy-making executive committee. If Woolworth's should feel a need to decentralize its organization further, it might follow Penney's example by giving its store managers more autonomy or it might, by increasing the decision-making role of its regional managers, make the region the major autonomous unit. Yet there would seem to be little pressure for either Woolworth or Penney to change their organizational structures radically unless they decided to go into some other type of distribution besides retailing.

It was just such a decision, though of a reverse nature — that is from wholesaling to retailing — that was a fundamental cause for the Sears, Roebuck and Company reorganization. In the 1920's Sears had a highly centralized organization. Its senior vice-presidents in charge of purchasing, operations, and finance had direct control over the activities of the general managers in charge of the mail-order plants.⁵³ In 1925 Sears decided to operate retail as well as mail-order stores, and by 1929 the recently appointed president,

⁵² The Woolworth story comes from its annual reports, *Fortune*, Vol. 8 (Nov., 1933), 62 ff.; Vol. 49 (April, 1954), 150; and *Sixty Years of Woolworth* (n.p., 1939).

⁵³ The Sears' experience is described in Boris Emmet and John E. Jeuck, *Catalogues and Counters: A History of Sears Roebuck and Company* (Chicago, 1950), 352-72. The administrative concepts and attitudes of the Sears officials are well expressed in J. C. Worthy, "Democratic Principles in Business Management," *Advanced Management*, Vol. 14 (March, 1949), 16-21.

General Robert E. Wood, realized that the old centralized structure was inadequate to handle these two quite different types of businesses. In 1929 he began a study of the problem which led in the following year to the creation of four territorial officers who had supervision of all Sears' activities within their regions. However, the lines of command and co-ordination between the retail and mail-order houses, the central office in Chicago, and the new territorial offices were ambiguous and confused. Given the contraction of markets because of the depression, the top executives decided to abandon temporarily this decentralized form and return to the older structure. All retail stores were then placed under one vice-presidency. This department, headed by James M. Barker, was organized much like Woolworth's. Its regional district managers supervised the individual stores and reported directly to Barker. During the 1930's, however, a *de facto* return to the regionally decentralized organization was cautiously worked out by Barker.

This decentralization did not become *de jure* until after the end of the Second World War. Then five territorial vice-presidencies were formed (one other had already been created on the West Coast in 1941). The manager of each was given full responsibility for the operating results of the Sears' activities in his area. He had a sizable staff to help him supervise and co-ordinate the work of four types of units under him. These consisted of "groups" of stores concentrated in one metropolitan area, large "A" stores, regionally defined zones of smaller "B" stores operating outside of the large urban centers, and the mail-order houses. The managers of each of these units had their own staffs of specialists and assistants, while the individual store or department managers were, in turn, given much autonomy in the making of business decisions. Except for purchasing, which remained centralized, the functional departments at Chicago now provided, on an advisory basis, specialized services and advice to the territorial units and top policy-making executives. The central unit thus became, in the words of Sears' historians, "the company's 'super-planning' group at the highest level and includes many specialists and a few very powerful executives."⁵⁴ Further integration between the senior executives and the staff and territorial vice-presidents is carried out in two committees, Merchandise Policies and the Committee on Organizational Problems. The over-all administrative structure of this distributing firm, then, has many similarities to that of the large decentralized

⁵⁴ Emmet and Jeuck, *Catalogues and Counters*, p. 365.

manufacturing companies — notably the autonomous operating units and the careful division of labor between the top generalists, the staff specialists, and the operating managers.

If the Sears, Roebuck organization is similar in many ways to that of General Motors, that of Montgomery Ward has long been very close to the organization of the Ford Motor Company before 1946. In fact, the personalities of Sewell Avery and the elder Ford, like the organizations they created, had much in common. Montgomery Ward & Company, like Sears, went through an administrative reorganization during the early 1920's. This reorganization, again as in the case of Sears, came about largely as a result of the decision to enter the retail business.⁵⁵ At Montgomery Ward, however, the change began after rather than before the depression crisis. Beginning in 1932 Avery, first as a consultant and then as the company's president, did an impressive job in reviving Montgomery Ward's business health.

Avery's basic therapy lay in centralization. First, he drastically reshaped the policies, personnel, and even the physical plant of both wholesale and retail organizations. He next strengthened the control of functional vice-presidents in charge of personnel, sales merchandising, operations, and finance. Retail stores were placed under the close supervision of regional district managers — each of whom handled about 150 stores and reported to a vice-president in charge of retailing. The local managers had less discretion and authority than those in Woolworth's and other chain stores. Top level coordination, supervision, and policy-making, while ostensibly performed by the department heads in committee, were from the start pretty much controlled by Avery. Possibly because of this one-man domination, the turnover of executive personnel at Montgomery Ward has been almost unprecedented. In fact, the "alumni association" of Montgomery Ward executives grew more rapidly in the 1940's than did the comparable number of Ford "graduates" of the 1920's. The recent palace revolution at Ward's, in which Avery and president Edmund A. Krieder were forced out of the company's management, may bring a change. As yet, however, there has been little indication that the new president and chairman, John A. Barr, is planning to decentralize operations.⁵⁶

⁵⁵ The information on Montgomery Ward & Company is from its annual reports and from *Fortune*, Vol. 11 (Jan., 1935), 69 ff.; and Vol. 33 (May, 1946), 111 ff.

⁵⁶ The recent changes at Wards are best described in *Business Week* (May 14, 1955), 30; (May 21, 1955), 34; and in *Newsweek*, Vol. 46 (Sept. 26, 1955), 84 ff. *Business Week* reasons that the large institutional investors who

The Food Companies

Because the nature of their business differs somewhat from the large distributing firms, at least two of the leading food companies, the Great Atlantic and Pacific Tea Company and Swift and Company, have developed a sort of split type of organization which may pose problems in maintaining effective central control. The Great Atlantic and Pacific Tea Company's marketing has long been organized somewhat like Sears'. Its distributing organization consists, according to *Fortune*, of "seven geographical divisions each with its own officers, its own large measure of autonomy and subdivided into operating units of sixty to over 300 stores."⁵⁷ On the other hand, unlike Sears its purchasing is also decentralized. Because it handles many fewer types of products than Sears and often more perishable ones at that, its buying and processing are done by such autonomous divisions as the National Meat Department, National Bakery Division, National Butter Division, National Egg and Poultry Division, Coffee Division, the Atlantic Commission, Inc. (green goods, fruits, and vegetables), and the Quaker Maid Company, Inc., which cans, bottles, and otherwise processes food products and also performs such diverse auxiliary functions as the operation of laundries and printing plants. These divisions not only provide goods for the marketing units, but are also expected to advise them on how best to sell the products. This type of co-ordination appears to be carried out on an informal basis. Available literature does not make clear how the central staff further aids in co-ordination or how the top management carries on its functions. Nor is it certain when the present operating organization was created, although it most likely took form after the final mergers and consolidations making up the present company were completed in 1925. In any case, there is little question that top level supervisory and policy decisions have long been controlled by the Hartford brothers, John and George, whose family started the firm in the 1850's. Possibly with the recent death of John Hartford and the imminent retirement of his brother, George, who in 1954 was over 90, the central offices will be enlarged and their structure as well as specific functions more carefully defined.

supported Avery against Louis E. Wolfson subsequently forced him out because of his ultra-conservative policies.

⁵⁷ *Fortune*, Vol. 36 (Nov., 1947), 104. This detailed article was supplemented by data taken from *Moody's Industrial Manual*. The annual reports say almost nothing. In 1954, according to *Moody's*, the Atlantic Provision Company, Inc., was dissolved and became a company division.

When they set up their organization the Hartfords may have examined the experience of the largest meat packing firm, Swift & Company. Well before the First World War Swift had separated its processing from its marketing.⁵⁸ Its "product" departments, including the beef, lamb, pork, poultry and dairy products, and canned food, delivered their goods to the warehouse of the Branch House Department or to the "car sales" agents. In the 1920's the Branch House Department handled sales in over thirty districts, each headed by a general manager assisted by a district sales manager and a fairly large staff. Areas not directly supervised by the branch house managers were covered by "car routes," whose salesmen ordered directly from the product departments. The car route agents, like the branch house managers, reported to one vice-president in the Chicago headquarters. Products such as fertilizer, leather, and miscellaneous by-products which could not use these two types of marketing outlets handled their own distribution and were, therefore, fairly self-contained units. The headquarters staff and service departments seem to be more concerned with providing advice and services than with co-ordinating the various activities of the different operating units. Top level supervision and policy-making seems to be carried out by the large number of vice-presidents who have charge of from one to three of the operating departments. Although the published reports and articles on Swift are not clear here, this organization would seem to be a cumbersome one for the effective formulation of policy, not only because of the number of officers involved, but also because their primary concern would appear to be for departmental rather than company-wide problems. The recent appointment of two executive vice-presidents may be a move to create a small controlling and policy-making top executive group made up of generalists rather than specialists. In any case, the company appears to be satisfied with its basic over-all administrative structure, as it has made no major changes for more than a generation.

The story of Swift's chief competitor, Armour & Company, is somewhat different. Until recent years Armour was organized more on functional lines.⁵⁹ Before World War I its major operating units

⁵⁸ In contrast to the A. & P. the annual reports or "yearbooks" of Swift & Company are full and detailed. Particularly good are the yearbooks of 1929, pp. 24-31; of 1932, pp. 20-22; of 1934, pp. 20-25, and 1949, pp. 12-13. Also helpful was *Fortune*, Vol. 46 (Sept., 1952), 102 ff.

⁵⁹ The reports of Armour & Company (Illinois) were less full than those of Swift. The most important are those of 1945, inside back cover, and that of 1949, pp. 4-5, which describes the changes made in that year. Some addi-

were the livestock, packing plant, sales, transportation, and foreign divisions; the major staff units were finance, treasury, and accounting. The sales department appears to have handled its function much in the same way as that of Swift. During the 1920's and 1930's product-oriented divisions developed, including poultry, leather, by-products, and a refinery division which processed and sold the company's entire production of fats and oils. In 1949 a significant step toward departmentalizing along product lines was taken when the buying and selling of each kind of meat were placed under one executive. By centralizing control over all operations involved in handling a line of products, one executive could thereby be made responsible for the financial results of his product division. Recently, too, many of the non-food products have been placed in an Auxiliaries Group, which in turn is divided into semi-autonomous product divisions including soap, chemicals, curled hair, abrasives, and ammonia. Neither magazine articles nor company reports indicate, however, how the central staff and executive offices are designed and how their duties are divided. It seems reasonable to suppose that Armour headquarters are not too dissimilar from those of other product decentralized industrial concerns.

The experience of the United Fruit Company and the National Dairy Products Company emphasizes once again the close connection between the nature of a firm's business and the organization of its over-all administrative structure. National Dairy, organized as a merger in 1923, has expanded steadily through continued purchases until today it has over sixty subsidiaries.⁶⁰ Because these subsidiaries were meeting the demands for perishable products in different geographic areas, there was little need to consolidate them into a centralized whole, or even into large territorially or product-defined units. The company's policy has always been, in fact, to leave its operating managers with a maximum amount of autonomy. In 1950, for example, the operating units set their own prices, production output, did their own advertising, and decided upon their own capital improvements.

The basic administrative problem for National Dairy, then, has been the formation of an effective central headquarters. From the start, the duties of the central staff have been to provide specialized services and advice. These services have been steadily enlarged

tional information was available in *Fortune*, Vol. 3 (April, 1931), 49 ff.; Vol. 9 (June, 1934), 58 ff.; Vol. 51 (May, 1955), 129 ff.

⁶⁰ The data on National Dairy Products Company came from its annual reports and from *Fortune*, Vol. 46 (Dec., 1952), 144.

and today include, among other activities, research, quality control, merchandising advice, and personnel and management training. In 1949 the duties of the headquarters' staff were more specifically defined with a grouping of these service units into an Executive Management Staff, which was given the task of assuring "coordination and teamwork among our subsidiaries."⁶¹

More difficult was the formation of an effective top executive unit. After 1928 major policy-making, supervision, and co-ordinating functions, which had at first been handled by a board made up almost entirely of the heads of major operating subsidiaries, were given to a smaller executive committee. In 1942, in direct response to the increasing complexities of wartime demands, an important change was made. The executive committee was enlarged to include a number of "outside" directors, all but two of whom were elected to the board that year. Many of the co-ordinating and possibly supervisory duties of the executive committee were given to a new operating committee, which consisted of the heads of leading subsidiaries, who also seem to have had charge of groups of smaller subsidiaries in their regions. As the "inside" members of the executive committee were also on the operating committee, they could now rely on the latter as well as on the headquarters staff and "outside" directors for assistance in policy planning and executive action. Such assistance may have been essential, since several of the executive committee are also heads of subsidiaries and so must have other duties besides over-all company planning and supervision.

If National Dairy is a good example of an evolving management structure, United Fruit Company provides a typical picture of a static one. From the first, even before the merger of 1899 created the modern company, this Boston managed firm was primarily concerned with one product — bananas — and with achieving a completely integrated unit from plantation to consumer.⁶² In the first decades of the twentieth century the company did develop holdings in Cuban sugar and Costa Rican cocoa, which could be easily fitted into its integrated, banana-oriented organization. As the major operations in the organization were quite distinct from each other and as successful growing and banana marketing depended on changing local conditions, the different functional units had from

⁶¹ The annual report of the National Dairy Products Company for 1949, pp. 6-7. The name, Executive Management Staff, appears to have been dropped in 1952.

⁶² The United Fruit Company story comes from Charles W. Wilson, *Empire in Green and Gold* (New York, 1947), supplemented by its annual reports.

the beginning considerable local autonomy. The growing areas were divided into large geographical units, each with a staff of specialists and each, in turn, being subdivided into smaller regional units. The marketing of bananas, handled by the Fruit Dispatch division, was also done along regional lines through branch offices in the major rail and port centers in the United States and abroad. The growing and marketing as well as transportation departments were headed by vice-presidents whose offices were in the Boston headquarters.

Besides managing their own departments, these men, assisted by the heads of the staff departments, carried on top level co-ordination of their activities with the president and his office. In what time they still had available they formulated current company policy and future plans. Although the company has long recognized the need for generalists in its top executive positions, it has done little to train such officers, nor has it made the necessary changes in the organizational structure to make such training possible. The only significant development in the company's organization since World War I has been the expansion of its co-ordinating and service departments. By the end of the 1920's these included the research, communications, advertising, public relations, personnel, and medical departments. As only limited attempts have been made at diversification, either in the development of by-products or the growth and marketing of tropical fruits and foods besides bananas, sugar, and cocoa, there has been little obvious external pressure on the United Fruit Company to make changes in its over-all operational structure.

The Tobacco and Liquor Companies

Even more than United Fruit, the large tobacco companies concentrate on one product. Whether they came into being by mergers or whether they were small firms grown large, their organizations have always been functionally departmentalized and highly centralized. The largest, the American Tobacco Company, today as was the case well over a generation ago has vice-presidents in charge of purchasing, manufacturing, marketing, finance, and advertising.⁶⁵ The only change during the past generation has been an increase in the size of the vice-presidents' staffs. The purchasing department, for example, has added an assistant vice-president in

⁶⁵ The information about the American Tobacco Company came mostly from its annual reports with a little additional data from *Fortune*, Vol. 14 (Dec., 1936), 97 ff.

charge of purchasing domestic leaf and another for Turkish leaf. The manufacturing department also acquired two assistant vice-presidents, while sales have been divided between a vice-president in charge of western markets and one in charge of eastern markets. The senior vice-presidents thus have more time to join with the president in executive committee to carry out the necessary coordinating, supervising, and policy-making functions.

The administrative structures of the other two leading tobacco companies, R. J. Reynolds Tobacco Company and the Liggett and Myers Tobacco Company, are much the same as American's.⁶⁴ They have smaller top staffs, however, and no cigar division. On the other hand, like American, they remain family dominated firms. Where the American Tobacco Company has had in its top management two generations of Hills, Liggett and Myers has had two of Toms and the third company two generations of Reynolds.

The administrative history of Distillers Corporation-Seagrams Ltd. parallels that of the three tobacco companies, while that of Schenley's, the second largest distilling firm, follows quite a different pattern. Seagrams, started in 1928 as a merger of two Canadian firms, expanded its operations into the United States in 1933 with the repeal of the eighteenth amendment.⁶⁵ It grew fairly rapidly in the 1930's and early 1940's, but concentrated this expansion almost wholly on the acquisition of whiskey distilling and marketing firms. Aside from whiskey, it makes some gin, has a small by-product unit which produces dried cattle grain, and a new subsidiary, the Pharma-Craft Corporation, which manufactures drugs and toiletries on a small scale. Because of its predominant concentration on whiskey-making and selling and because its top management has from the beginning been dominated by one family, the Bronjmans, there is little reason to anticipate changes in this highly centralized, functionally departmentalized management structure.

The other leading distilling company, Schenley Industries, Inc., has since the end of prohibition stressed product diversification. In the 1930's, while concentrating on domestic whiskey, it became the American distributing agent for Bacardi rum and for many of the best-known European wines and liqueurs.⁶⁶ Then, between 1942

⁶⁴ The generalizations on both companies are based on their annual reports. *Fortune*, Vol. 3 (Jan., 1931), 45 ff.; Vol. 18 (Aug., 1938), 25 ff., are good on the R. J. Reynolds Tobacco Company.

⁶⁵ The data on the Distillers-Seagram Ltd. are from its brief annual reports.

⁶⁶ The Schenley story is also from the annual reports. *Fortune*, Vol. 13 (May, 1936), 99 ff., provides some more information. Other important subsidiaries

and 1945 it purchased the Roma Wine Company, the Blatz Brewing Company, two Puerto Rican rum concerns and two other wine firms. Moreover, during the war it began long-scale manufacturing of industrial alcohol and, more important for postwar operations, penicillin, penicillin products, streptomycin, and a variety of pharmaceuticals.

With this expansion the firm's management has become increasingly decentralized. Its major operating subsidiaries are divided along both functional and product lines. Schenley Distillers, Inc., operates the distilleries and most of the bottling plants except those in Pennsylvania and Maryland, which are run by Joseph S. Finch and Company. The major share of the marketing is handled by the Schenley Distributors. Wine, however, which is manufactured under the auspices of the parent company in California, is distributed by the C.V.A. Corporation. Schenley's Import Corporation, Schenley's International Corporation, and the Louisville Cooperage Company handle other important functions, while all beer operations are conducted by the Blatz Brewing Company and pharmaceuticals by Schenley Laboratories, Inc. The central staff offices continue to grow, particularly the sales staff, and appear to play as important a role in co-ordinating the operating units as in providing them with services. After a change of command in 1952, the top supervisory and policy-making group was enlarged and its functions seem to have been more carefully defined. The annual reports and articles written about Schenley, however, do not indicate clearly the duties and functions of the company's large number of vice-presidents, the degree of autonomy given the heads of the operating units, or the specific duties of the central staff and executive offices.

Summary: Market-Oriented Firms

The Schenley experience, like that of the other food, stimulant, and marketing firms, emphasizes the point that growing complexity of operations is the major stimulus for decentralizing operations. Its experience is also a reminder that such complexity does not necessarily result from increasing size alone. Schenley's operations, for example, are certainly more complex than those of the larger Seagrams concern or, for that matter, of the still larger tobacco companies. And when complexity turns a management to decentralization, the history of these companies indicates again how the

of Schenley Industries, Inc., are Canadian Schenley, Ltd., and Ron Carioca Distilleria of Puerto Rico.

orientation of the autonomous units varies with the nature of their business. Still, whether the organization of these food, stimulant and distributing firms is articulated along regional, product, or functional lines, its basic structure has much in common with that of decentralized companies in other American industries.

SUMMARY AND CONCLUSIONS

After this examination of the administrative history of fifty of the nation's largest industrial firms, the historian can report categorically that this relatively new type of decentralized, over-all management structure has become a dominant one. Since the First World War both highly centralized, functionally departmentalized operating companies and loosely federated holding companies have reorganized their administrative structures so that operations are handled by autonomous management units whose work is co-ordinated and supervised by a central unit consisting of a staff of specialists and an executive office of generalists. This change has resulted from the growing complexity of operations and the administrative problems raised by such complexity. For some firms these pressures resulted from the development of new lines of products and new markets or from significant changes in existing markets. This has been particularly true for the chemical and electrical firms, but also for some rubber, automotive, oil, marketing, food, and liquor firms. For others, and this has been especially characteristic of the oil, food, and paper firms studied here, the growing complexity and resulting decentralization came as these companies expanded operations into different and diverse regions of the nation and the world. For a few automotive, oil, and non-ferrous metals firms the change was primarily a response to an increase in the size of their operations. Finally, the firms that have retained the old centralized structures are those that still stick largely to the making and selling of one major line of products. The experience of the non-ferrous metals firms suggests that there may be a correlation between lack of competition, slow growth, and administrative conservatism.

For most of the companies that made the change, the new complexities came in times of prosperity and in an expanding economy. The first major administrative reorganizations to set up decentralized structures were made in the 1920's, and the largest number of them came in the 1940's. Important reorganizations took place during the years of the great depression but, except for those in some of the large oil firms, they more often led to tightening rather than decen-

tralization of top management's control over day-to-day operational decisions.

It does seem significant that decentralization did not become widespread before 1920. Before the First World War nearly all large industrial companies concentrated on the processing and marketing of one major line of closely related products. Often, too, where the company was formed by a series of mergers motivated primarily by a desire to control price and production, the men managing the merged properties continued for some time to consider their chief function to be that of setting price and output quotas rather than that of co-ordinating operations to meet the demands of a changing and expanding market. In the 1920's swift urban and suburban growth enlarged and altered markets, particularly the consumer markets. The opening of new sources of raw materials in the United States and abroad extended the operations of the vertically integrated companies. Rapid changes in the techniques and technology of manufacturing and marketing emphasized even more the need for flexible administrative structures. Finally, just before and after World War I, companies like duPont, Union Carbide, United States Rubber, General Electric, and Westinghouse began an extensive program of product diversification and systematic research and development which made their existing administrative organizations obsolete.

The problems encountered in changing to the more flexible decentralized structure reflected the way a company's business had expanded and changed. For the firm that expanded by new plant construction and the purchases of smaller companies, the most serious initial problems involved the creation of effective autonomous operating units. For the company that came into being after a series of mergers the primary concern, aside from rationalizing its extractive, processing, and marketing units, was the formation of an effective central co-ordinating, supervising, and policy-making unit.

The form and functions of the central and operating units that were created to answer these problems also varied with the basic nature of the firm's business and the manner in which it had grown. Where its business remained that of processing and marketing a comparatively few closely related products, the major operating subdivisions were organized along functional lines — a separate, self-contained unit for each of the major processes in the progression from obtaining raw materials to reaching the consumer. Where marketing became the most complex part of a business, as was the

case of some distributing or food firms, the major units were often set up on regional lines. Finally, where a firm's business was based on a broad technology (chemical, electrical, or automotive engineering) which produced a large number of products for widely varying markets, the self-contained operating units were organized around products or groups of products.

So also did the nature of the business affect the size, organization, and duties of the central co-ordinating, supervising, and policy-making unit and of the central service staff. In the functionally decentralized organization, both the top management group and the central service departments remained comparatively small. The staff officers appear to have been even more concerned with co-ordination than with providing services. The small senior top management group often included some men who were more operating specialists than policy-making generalists. In regionally decentralized firms, the central staff units put more emphasis on supplying services to than in co-ordinating the efforts of operating units, while top management was usually relieved of the day-to-day operating decisions. Finally, the firms whose operating units were defined along product lines had the largest central offices. In these cases the service departments, while playing an important co-ordinating role, were most concerned with providing services to both the operating divisions and the top management group. The latter usually consisted almost wholly of men who had little to distract them from focusing on the over-all company view. Such central offices had much in common with those devised by Standard Oil (N. J.) and Standard Oil of California and used between 1937 and 1950 by the United States Steel Corporation. However, such units which supervised and made policy for regionally integrated as well as for functional and product subsidiaries were given larger co-ordinating roles than those in product decentralized firms.

Although increasing size, diversity, and complexity of operations have been the primary cause for administrative reorganization they have in no way guaranteed it. Too often managements have failed or refused to recognize that growth or qualitative changes in producing and marketing required administrative readjustment. In many of the firms studied here necessary reorganization came only after the retirement and occasionally not until the death of a powerful executive or dominant group of managers. Until the retirement of Elbert H. Gary, Gerard Swope, the elder Henry Ford, Willard Dow, Harry F. Sinclair, Sewell Avery, K. T. Keller of Chrysler,

Orlando Weber of Allied Chemical, Harold McCormick and Addis E. McKinstry of International Harvester, and E. T. Stannard of Kennecott, the firms they had long managed were unable to make the essential administrative adjustments required by growth and changing external conditions. In 1955 a number of the most highly centralized organizations among the top fifty industrial firms were those still dominated by men well beyond the normal compulsory retirement age. This was true of the management of Firestone, Goodyear, Anaconda, International Nickel, Alcoa, Seagrams, A. & P., Bethlehem Steel, and Republic Steel. Moreover, most of these companies continued to concentrate more than their competitors on the single line of products their managers had produced when both they and the company were younger. As these veterans leave the scene many of their firms will undoubtedly make significant changes in their management structures.

It may be safe to say, therefore, that while the causes for administrative reorganization were the development of new products, shifts in established markets, and expansion of the over-all economy, the timing of these changes has been greatly influenced by the turnover of top management personnel. Of course, a crisis or semicrisis created by overproduction or by sudden contractions and, occasionally, by rapid expansion of markets did force changes on a well-established top management. And if it resisted or failed to adjust to the new situation, that management sometimes was replaced. But, except for crisis, age was the primary reason for changes in the top management. Nevertheless, several large corporations did make basic organizational changes before the coming of a crisis and without requiring a major change in the top command. Some of the most significant innovations were made by relatively young men who might have managed their organizations in the old way with a more than fair assurance of continuing profits.

The fundamental innovations in the major variations of decentralized administrative structures existing in large industrial concerns all came in the 1920's. The first and by far the most significant was that engineered by Irene and Pierre duPont in 1921. The two brothers created simultaneously for the duPont company and for General Motors the organization that is still the model for companies decentralizing their operations along product lines. Since more and more companies are turning to product diversification as an answer to a number of their business problems, this type of structure will undoubtedly become even more widely used than it is

today. What the duPonts did for the multi-industry firm, Walter Teagle and his Standard Oil of New Jersey staff did for the integrated, single-industry concern. Moreover, besides innovating in functional decentralization, Teagle pioneered in the creation of a central unit which could effectively co-ordinate and supervise a number of huge vertically integrated subsidiaries as well as functional and product-defined autonomous operating units. The final innovation, that of regional decentralization, was initiated by General Robert Wood in 1929. Although it has for obvious reasons not been widely adopted by industrial concerns, the Sears, Roebuck organization has been copied in the decentralization of large financial firms, particularly the insurance companies.

These innovations are among the most notable in the long history of large-scale organization. The creation of a new over-all administrative form before a major external crisis or internal change of command takes place is, historically, an impressive achievement. Even the most imaginative efforts in the creation of government and military administrative structures, such as those of Alexander Hamilton's formation of the executive branch of the American government or Elihu Root's reorganization of the Army, came after periods of change and crisis. Moreover, there are few cases in history where men in power have consciously and willingly delegated a large number of key decisions and responsibilities. Prior to the communications revolution of the nineteenth century, military, church, government, and business bureaucracies permitted local managers a wide range of decision-making. But this was largely because of the limitations of technology and not because of the specific desire of the top command. Once the technological limitations of communications and control were overcome, the trend was to centralize more and more decisions in the top office.

The recent innovations in the administrative organizations of large business firms may be reversing this trend. This shift to decentralization is undoubtedly easier for a business than for a government or military organization because the nature of business operations provides the central headquarters with more readily available criteria for continuous evaluation of the performance of operating units. But also, business decentralization may have been successful because the type of structures the duPonts, Wood, and Teagle created defined more clearly and more realistically than almost any other administrative organization yet devised the role and functions of the staff specialist, the operating commanders, and the top policy-making and controlling officers.

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Vicissitudes of the South Carolina Railroad, 1865-1878: A Case Study in Reconstruction and Regional Traffic Development

¶ The Best Friend of Charleston was a famous locomotive engine, but the real best friend of Charleston was the engine's owner, the South Carolina Railroad. Together the city and the railroad faced and endured the rigors of Reconstruction; both held fast to an ante-bellum dream of regional dominance. The railroad made bold moves to acquire the trunk lines and feeder systems that would make Charleston a Gateway to the West. But frustrating forces were at work. Developing traffic patterns did not favor Charleston, and profligate multiplication of competing lines cut into existing business. Rate agreements and pooling arrangements gave the company only mild relief at best. By 1878 Charleston had resigned itself to its role as a local trading center, and the SCRR was in bankruptcy, the victim of circumstances too powerful for even the most competent of managements to combat.

Management of a wrecked enterprise was the problem that faced the officers and directors of the South Carolina Railroad as they surveyed their war-damaged property in 1865.¹ Their efforts for the next thirteen years to create prosperity out of the ashes of war form an epic story that reveals not only the difficulties of doing business in the war-torn South but also the problems of a debt-burdened railroad management in an era when new construction was rapidly creating an intensified competition. The railroad served Charleston

¹ This article is a product of research conducted by the author with the financial aid of the Research Committee of the University of Alabama. For other kinds of assistance the author is indebted especially to the South Caroliniana Library, the Charleston Library Society, the Library of the Bureau of Railway Economics of the Association of American Railroads, the Southern Freight Association, the Southern Railway Company, and the Central of Georgia Railway Company. An abridged version of this account was read at a joint meeting of the Lexington Group and the American Historical Association in Washington, D. C., on Dec. 28, 1955.

interests so closely that the fate of one was tied to that of the other, and the two must be studied together.

Trains first ran over the South Carolina Railroad from Charleston to Augusta in 1833.² Within a few years a branch line reached out from a mid-point on the main stem to Columbia, from which line in turn another branch went to Camden (see map), giving the company a total of 242 miles of line. Charleston enterprise supplied some of the capital and borrowed more from abroad in an effort to make Charleston the great emporium of the South and West, a funnel through which the commerce of the interior should pass, in rivalry with New York and New Orleans.

By 1860 connecting lines ramified from Columbia into upper South Carolina, and one was headed across the mountains toward Knoxville. By that time Charleston had connections by way of Augusta and Atlanta with Montgomery, Chattanooga, Memphis, Nashville, and Louisville. The company prospered and paid modest dividends while expanding its facilities. Its cash position was good and its fixed charges moderate.

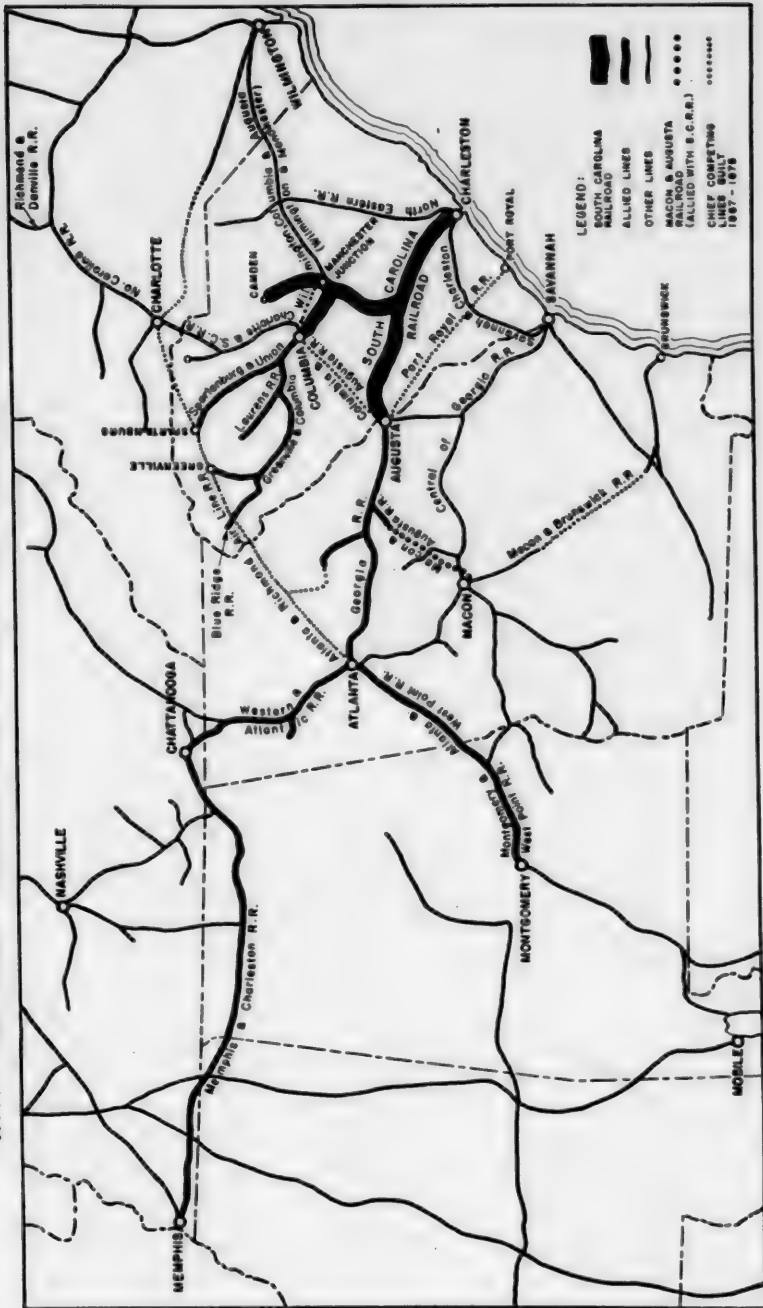
THE DESTRUCTION OF WAR

Then came the Civil War. Four years of banging wear and tear in Confederate service, with few replacements, and an accumulation of depreciated Confederate money and obligations, hurt the company. General Sherman's specialists in destruction, arriving in the spring of 1865, delivered the *coup de grâce*.

Out of assets worth perhaps \$8,000,000 the company's loss from war damage was considerably over \$3,000,000 in United States currency, plus \$3,612,945.57 in Confederate money of indeterminate value. By a very rough estimate perhaps half the company's assets had been lost.

On long stretches of road there was destruction of all the wooden

² The company building the Charleston-Augusta line (which terminated for many years after 1833 at Hamburg, on the South Carolina side of the Savannah River, opposite Augusta) was the South Carolina Canal and Rail Road Company. The branch to Columbia was built by an affiliate, the Louisville, Cincinnati, and Charleston Rail Road Company. The two were merged in 1844 to form the South Carolina Rail Road Company, which, with its antecedents and its property, is here for convenience referred to as the "South Carolina Railroad." For a comprehensive history see Samuel Melancthon Derrick, *Centennial History of South Carolina Railroad* (Columbia, S. C., 1930). This book contains interesting photographs. Useful also on the company's early history is U. B. Phillips, *A History of Transportation in the Eastern Cotton Belt to 1860* (New York, 1908). See also U. B. Phillips, "Transportation in the Ante-Bellum South," in *Quarterly Journal of Economics*, II (May, 1905), 434 ff.

[illegible]

structures: cross-ties, culverts, bridges and trestles, station houses, and water tanks. Rails had been "burnt, twisted, and bent into shapes utterly baffling efforts at restoration," said the management. The ends of the system at Charleston, Augusta, and Camden were not destroyed but were left isolated by the destruction of the intermediate stretches.³

"At Columbia," reported the directors, "all the shops, depots, and buildings of every description, most of the valuable tools, many new and of the most improved makes, with all the appliances of as complete a shop, just finished, as, for its design, perhaps the southern country could exhibit — all these, together with a very large and most valuable collection of material, obtained only with great difficulty and expense, were utterly destroyed."⁴ Some of the machinery and available rolling stock had been hastily taken from Columbia up the connecting road toward Chester to get it out of the way of the Federal raiders.

Out of 59 passenger and mail cars only 27 escaped destruction; out of 612 freight cars only 252 decrepit specimens survived. Of the 62 locomotives, ten were isolated on the Charlotte and South Carolina Railroad line with many of the cars. One engine lay wrecked on the North Carolina Railroad, and another was isolated in Georgia. Three more were cut off on the Camden branch with about 30 of the cars. Nearly all the other engines were burned out or wrecked or in such bad condition as to be unfit for service. Eighteen were condemned as beyond repair.⁵

The company had no funds with which to begin reconstruction when its property was returned to it on June 19, 1865. Confederate money had become worthless. President William J. Magrath went to New York to seek a loan but returned empty-handed. However, skilled management and enterprise had not been destroyed, and the railroad organization was still alive.

RECONSTRUCTION

Starting from the Charleston end, the officers and directors went to work with a will to restore their property, paying for the work out of revenues from transportation. Obtaining supplies and training

³ Annual report of the South Carolina Railroad for the year ending December 31, 1865, in "Affairs of the Southern Railroads," *House Report* No. 34, 39th Congress, 2d Sess. (1866-67), p. 1036; testimony of W. J. Magrath in *House Report* No. 3, 40th Congress, 2d Sess., p. 33.

⁴ *House Report* No. 34, 39th Congress, 2d Sess., p. 1036.

⁵ *Ibid.*, pp. 1055, 1057.

and keeping a labor force were constant and difficult problems under the turbulent conditions of 1865. Operations were at first severely restricted, but the demand for transportation so exceeded the supply that sky-high rates could be charged. To restore the main lines the rails were stripped from the Camden branch and 4,325 tons of new rails were purchased. Bent rails which could be straightened were used on sidings.

Locomotives that had been smashed with sledge hammers and burned out and rusted were repaired and restored to service. Shop tools were repaired or replaced and essential structures rebuilt. The iron parts of burned cars were retrieved and used in newly constructed cars. The rickety, ramshackle product of all these efforts was not pretty to look at, but it worked, and improvements and additions were made as rapidly as the financial condition of the company permitted.⁶

The road was reopened from Charleston to Columbia in January, 1866, and to Augusta the following April. Not until 1867 was the Camden branch restored.⁷

On January 1, 1866, the full principal of a \$2,000,000 sterling debt fell due, and \$234,000 out of \$1,071,000 in domestic, non-mortgage bonds was past due. Serial maturities on the rest were to begin on January 1, 1868. There was \$495,799.47 of accrued interest due, and claims were pending which were to cost the company \$147,203.77 in 1868. Liquidating the affiliated Southwestern Railroad Bank was ultimately to take another \$626,072.08, for the railroad company was adjudged liable for the bank's circulating notes. Premiums on sterling exchange were another heavy expense due indirectly to the war.

Creditors were patient. Since the matured sterling debt was secured by a first lien on valuable railroad property and by a state guarantee, the English bondholders felt reasonably secure. But would they accept a substitution of new bonds and would the state guarantee new bonds to replace the old and to provide for the funding of accrued interest? These questions were long overhung with

⁶ *Ibid.*, pp. 1035-57, *passim*; at p. 1057 is an elaborate table showing the condition of each of the engines on December 31, 1865, when only seven appeared to be both serviceable and available.

⁷ *Ibid.*; *Proceedings of the Stockholders of the South Carolina Railroad Company, and of the South-Western Railroad Bank, at their Annual Meeting in the City of Charleston, on the 12th and 13th February, 1867* (Charleston, 1867); *Annual Reports and Statements of the South Carolina Railroad Co. for the Year Ending December 31st, 1868* (Charleston, 1869).

anxious uncertainty, but in 1871 the company achieved a favorable settlement.

Although operations were on a small scale in 1865, the company's gross revenue from June 19 to December 31 was \$413,757.19, of which only \$134,595.50 was taken by current operating expenses, the rest going to repair the war damage. After allowing for deferred interest charges, the company was producing a profit of perhaps 4 or 5 per cent per annum on its stock, but all this, and more, was needed for reconstruction. In 1866, despite a decline in freight rates, the company earned an apparent 6 per cent on its stock, although use of sound accounting practices would have cut this figure somewhat. The company operated steadily at a profit, but time was required to restore the waste.

For four years the company did not dare to adjust and close its books. Large figures for "loss of property" and "restoration of property" and other extraordinary expenses were carried as "assets." The burden of bank liability, delayed since 1865 by legal proceedings, hit the company a hard blow in 1869 and caused the bill-payable account to rise sharply. By heroic bookkeeping, losses of the affiliated bank were represented as an asset, a "loan" made by the railroad company to the bank. Accounts were adjusted and closed at the end of 1869, and in 1870 a balance sheet was finally published. By a stroke of the pen the value of the roadway, track, and structures was written up from \$6,472,000 to \$7,733,000.

In 1867 freight rates dropped off rapidly, and the decline continued through the subsequent years. Thus, although freight tonnage increased from 73,486 in 1866 to 270,278 in 1870, freight revenues remained nearly static. The company fortunately was able to reduce considerably its costs per ton. Disorder and corruption in the state during the period of radical reconstruction, beginning in 1867, and the economic collapse and long-lasting depression of the 1870's brought dark days to the South Carolina Railroad. Equally damaging was the wild spree of building more railroads than the southern country could support, and the cut-throat competition which followed.

THE STRUGGLE FOR REGIONAL DOMINANCE

The identification of the company with the interests of Charleston was very close, and a large part of the road's traffic moved into and out of that city, to which it was a commercial lifeline. Since shipping at Charleston was erratic after the war, the company increased

CHART NO. 1. SOURCES OF GROSS EARNINGS

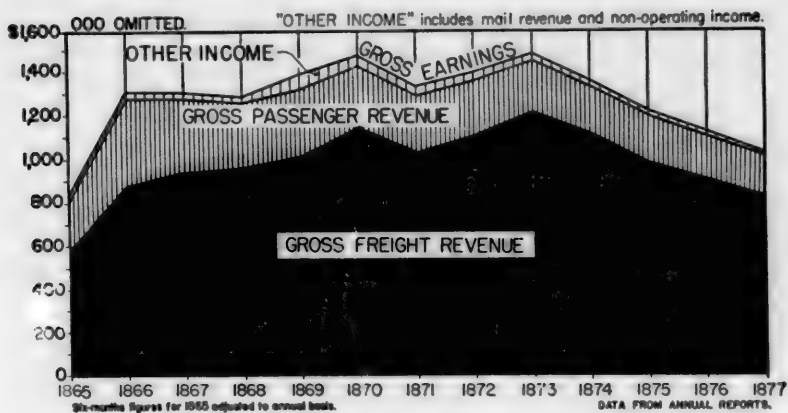


CHART NO. 2. APPLICATION OF GROSS EARNINGS

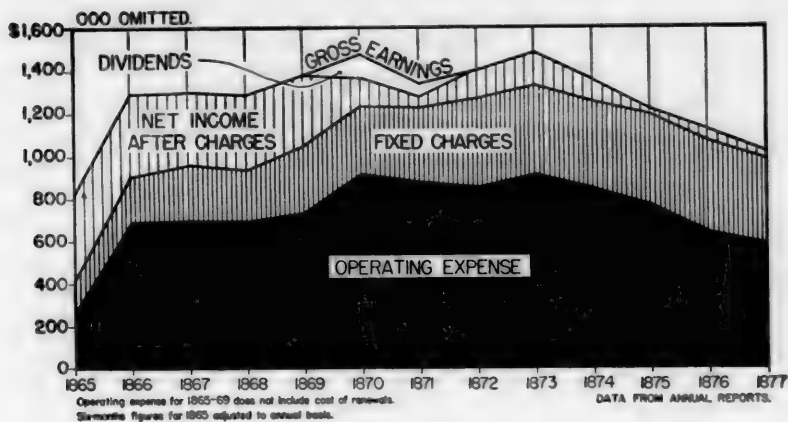
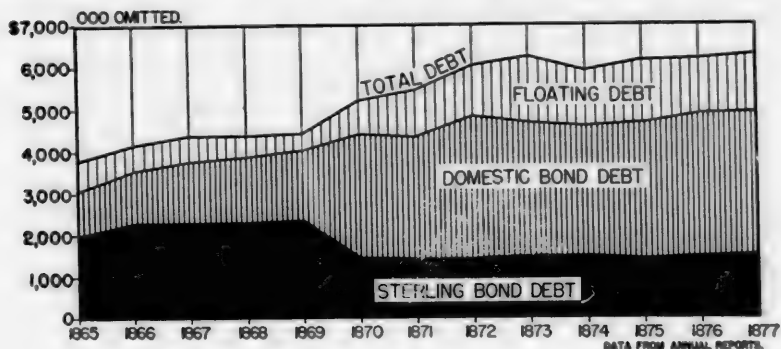


CHART NO. 3. DEBTS OF THE SOUTH CAROLINA RAILROAD COMPANY



its investment in the stock of steamship companies from \$17,527.50 in 1865 to \$266,063.74 in 1870. This investment was not profitable and it tied up capital needed elsewhere, but it helped to guarantee coastwise steamship connections at Charleston and thus to attract business.

The company's most important railroad connection was with the Georgia Railroad at Augusta (see map), for by this route access was obtained to Atlanta, Montgomery, Chattanooga, Memphis, Nashville, and Louisville. Competing for the business of the same area and dominating that of central and southwest Georgia was the Central of Georgia, which funneled its traffic through the rival port of Savannah.

To reach Macon and the southwestern part of Georgia the South Carolina Railroad had invested \$150,000 in the Milledgeville Railroad (later Macon and Augusta), which languished incomplete in 1865. With this and other investments the South Carolina Railroad Company owned \$261,535.00 of the stocks of other railroads in 1865, these representing frozen if not worthless assets. Before the war Charleston capital had aided materially in building the line from Chattanooga to Memphis, which was appropriately named the "Memphis and Charleston." In operation it tended to turn traffic toward New Orleans rather than Charleston.

The great desire of Charleston interests to obtain a direct line to the Ohio River so that Charleston might become a great port for the growing commerce of the West had taken concrete form in the construction of the Blue Ridge Railroad, which was moving from upper South Carolina toward Knoxville when the war broke out. In connection with other railroads projected in Tennessee and Kentucky the project was revived with great enthusiasm in 1866, but adequate financing was not available and the Blue Ridge Railroad fell into the hands of fraudulent promoters.

The South Carolina Railroad had connections with North Carolina by way of the Wilmington and Manchester and the Charlotte and South Carolina. The Greenville and Columbia was an extremely valuable connection at Columbia.

Recovery from the destruction of war had not progressed far before the city of Charleston and the South Carolina Railroad had to meet the competition of rival interests. As early as 1866 the company was fighting against the renewal of a prewar project to build a line from Columbia to Augusta with state aid. The road was built, however, and opened in 1869. This was an extension of the Charlotte-oriented Charlotte and South Carolina Railroad, with which

it was consolidated in 1869 under the name of Charlotte, Columbia, and Augusta. The new line diverted traffic from the South Carolina Railroad and adversely affected rates.⁸

The Macon and Augusta (formerly Milledgeville Railroad), in which the South Carolina Railroad had by 1870 a \$200,000 investment, was opened to Macon in December, 1870. When rivals hailed the opening of the new line with enthusiasm, the South Carolina Railroad rushed in to invest \$250,000 more in the depreciated stock of the Macon and Augusta to obtain control.⁹ Connections at Macon, however, were in the hands of the Central Railroad and Banking Company of Georgia (Central of Georgia), except for the new Macon and Brunswick, which was soon, in bankruptcy, to become a cut-throat competitor. The Macon and Augusta was unprofitable and was destined for bankruptcy. It was bought up cheaply by the Georgia Railroad and Banking Company (Georgia Railroad) at a foreclosure sale in 1879.¹⁰ The South Carolina Railroad lost an investment of \$450,000.

For survival the South Carolina Railroad needed the confidence of both creditors and stockholders, so the management always spoke with an optimistic outlook. The annual report for 1869 expressed the "liveliest gratification" at the financial condition of the company, and promised dividends the next year. This was before an agreement had been reached with the English bondholders and while every available dollar was needed for reconstruction. Small dividends, aggregating \$174,582.00 were actually paid in 1870 and 1871. From the financial standpoint alone this was foolish, but the general need for money in South Carolina was so great that if dividends had not been forthcoming, a widespread selling of the stock at a sacrifice could have been expected. If eastern speculators had

⁸ *Proceedings of the Columbia and Augusta and Charlotte and South Carolina, and the Charlotte, Columbia and Augusta Railroad Company Held at Columbia, S. C., July 7 and 8, 1869* (Columbia, 1869), *passim*; *Proceedings of the Stockholders of the South Carolina Railroad Company, and of the Southwestern Railroad Bank, at their Annual Meeting, in the City of Charleston, 8th and 9th February, 1870, with the Annual Reports and Statements of the South Carolina Railroad Company, for the Year ending December 31st, 1869* (Charleston, 1870), p. 15.

⁹ *Proceedings of the Stockholders of the Charlotte, Columbia & Augusta Railroad Company, at their Second Annual Meeting, Held at Columbia, S. C., May 3, 1871* (Columbia, 1871), p. 4; *Annual Reports and Statements of the South Carolina Railroad Company for the Year Ending December 31, 1871* (Charleston, 1872), pp. 3, 5.

¹⁰ *Reports of the Directors, &c. of the Georgia Rail Road & Banking Company, to the Stockholders in Convention, May 12, 1880* (Augusta, 1880), p. 6. The Macon and Augusta had always been operated by the Georgia Railroad.

bought up the stock, control of Charleston's railroad lifeline would have been lost to the city. The needy and impecunious character of southern railroads and the inability of the local people to supply their financial needs made them easy prey for financial adventurers.

Virginia and other southern states owning stocks of their railroads began in 1870 to throw these stocks on the market. In 1871 a group of northern railroad promoters and bankers organized the Southern Railway Security Company to take advantage of the opportunity thus presented. They were H. B. Plant, Morris K. Jesup, D. Willis James, and R. T. Wilson, of New York; W. T. Walters and B. F. Newcomer of Baltimore; and J. D. Cameron, G. W. Cass, and Thomas A. Scott, of Pennsylvania, these last three being closely associated with the Pennsylvania Railroad.¹¹ The purpose declared by the charter was "to secure the control of such Southern railroads as may be essential to the formation of through lines between New York, Philadelphia, Baltimore, Washington City, and the principal cities of the South, by ownership of the capital stock of said companies, by leases, and by contract relations."¹² Numerous northern and English bankers and several southern railroad men were soon taken into the scheme. The stockholders were a select group and often camouflaged their operations. They did not make public reports, and the public had rather vague ideas of their operations.

The roads actually obtained by the combination reached as far south as Memphis, Atlanta, and Charleston. The schemers met with frustrations and overreached themselves, but they had a lasting effect upon the pattern of later railroad consolidations. They obtained a controlling interest in 1871 in the Charlotte, Columbia, and Augusta, the special rival of the South Carolina Railroad, and then of the Wilmington, Columbia, and Augusta (formerly Wilmington and Manchester), which broke its connection with the South Carolina Railroad at Manchester Junction and built its own line into Columbia in 1871.

The combination threatened to cut the South Carolina Railroad off from the tributary area reached by the Greenville and Columbia in the upper corners of South Carolina. Should the Greenville and Columbia fall into hostile hands, a heavy blow would have been struck to the trade of Charleston.

Threatened with this loss of tributary territory, the South Carolina Railroad took a bold course. Despite its financial weakness, the com-

¹¹ Southern Railway Security Company, *Organization and Charter of the Southern Railway Security Company* (n.p., 1871), pp. 4, 20.

¹² *Ibid.*

pany proceeded to buy up the depreciated securities of the Greenville and Columbia and obtained control in January, 1872. Although this move was applauded in Charleston,¹³ the cost was high. The stock cost \$295,626.90, and with additional investments to protect the company from claims and for other purposes the acquisition had absorbed \$898,627.74 of the South Carolina Railroad's capital by 1873.¹⁴

There was a report in circulation in December, 1871, that the Southern Railway Security Company had brought under control the leading railroads of Georgia and South Carolina.¹⁵ The report was false, but the effort was being made, and the Central of Georgia, the Georgia Railroad, and the South Carolina Railroad were deeply alarmed.¹⁶ On the request of the South Carolina Railroad in February, 1872, the directors of the Central appointed a committee to confer with the former "as to a policy and general management that would promote harmonious relations and ensure efficient resistance to threatened combinations."¹⁷ A few days later Charleston was excited with rumors that the Central was about to lease the South Carolina Railroad.¹⁸

While the rumored lease was not effected, the directors of the Georgia Railroad and Banking Company reluctantly but in great alarm rushed to endorse \$500,000 of the bonds of the floundering Port Royal Railroad and get control of its stock.¹⁹ The Port Royal Railroad, 112 miles long, was completed from Augusta to Port Royal on March 1, 1873.²⁰

Two other railroads served Charleston, the North Eastern, which

¹³ The *Charleston News and Courier*, April 14, 1872, called the purchase "a masterly stroke."

¹⁴ *Poor's Manual of the Railroads*, 1874-75, p. 518. Some of this investment was regained, for the annual report for 1877 shows an involvement of only \$549,530.90. *Annual Reports and Statements of the South Carolina Railroad Co. for the Year Ending December 31st, 1877* (Charleston, 1878).

¹⁵ *Railroad Gazette*, III (Dec. 16, 1871), 387.

¹⁶ Minutes of Directors, Central Railroad and Banking Company of Georgia, Dec. 15, 26, 1871, Feb. 27, 1872 (MS in possession of Central of Georgia Railway Company, Savannah); *Proceedings of the Stockholders of the South Carolina Railroad Company and of the Southwestern Railroad Bank, at their Annual Meeting, in the City of Charleston, on the 8th and 9th of April, 1873* (Charleston, 1873), pp. iv-viii.

¹⁷ Minutes of Directors, Central Railroad and Banking Company of Georgia, Feb. 27, 1872.

¹⁸ *Railroad Gazette*, IV (March 9, 1872), 107.

¹⁹ *Report of Directors, &c. of the Georgia Rail Road & Banking Company, to the Stockholders in Convention, May 8, 1878* (Augusta, 1878), pp. 8-9. The Port Royal Railroad defaulted on its bond interest in Nov., 1873, and was sold in foreclosure on June 6, 1878.

²⁰ *Poor's Manual of the Railroads*, 1873-74, p. 342.

the Southern Railway Security Company controlled, and the Savannah and Charleston, which had suffered great destruction during the war and had been reopened in 1870. The two were not physically joined into a continuous line through Charleston until 1877. They were not really competitors of the South Carolina Railroad, but the building of the Port Royal Railroad, which crossed the Savannah and Charleston, opened a potentially competitive route between Augusta and Charleston, a dangerous thing from the point of view of rate stability.²¹

The Southern Railway Security Company obtained control in 1871 of the Richmond and Danville in Virginia, and by leasing the North Carolina Railroad gained entry into Charlotte. The Richmond and Danville, aided by money secretly advanced by the Pennsylvania Railroad,²² made possible the completion of the Atlanta and Richmond Air Line (from Atlanta to Charlotte) in September, 1873, and the opening of what was called the "Piedmont Air Line" from Richmond to Atlanta. The line cut right across the tap lines that had made upper South Carolina tributary to the South Carolina Railroad and Charleston, and its construction represented a major calamity to the South Carolina Railroad. The new line, however, was plagued with many troubles, and the new Atlanta and Richmond Air Line landed in receivership in December, 1874.

RATE WARS AND CHANGING TRAFFIC PATTERNS

The South Carolina Railroad's struggle for traffic was a discouraging one. The volume of the agricultural traffic depended primarily upon the amount of cotton produced and its price per pound, for thus were the income of the people and their buying power determined. Charleston was a market and distributing center for a considerable local trade, but the opportunity for growth in this field was limited by the economic weakness of the hinterland. The merchants of the city and the officers of the South Carolina Railroad continued an effort begun long before the war to expand the trading area of Charleston and get the trade of the West.

The main trade of the West, however, turned out to be in food shipped from the West into the South and distributed through

²¹ The Savannah and Charleston entered receivership on April 28, 1874.

²² Richmond and Danville Railroad Company, *Report of Special Investigating Committee Appointed under Resolution Adopted by the Stockholders at the Annual Meeting held in the City of Richmond, Dec. 8, 1875* (n. p., 1876), p. 7.

southern trade centers. As far as the South Carolina Railroad was concerned, there were two movements in this trade, one from the West to Charleston and the other the distributive movement out from Charleston as a jobbing center. The northern trunk lines could

CHART NO. 4. FREIGHT TRAFFIC AND REVENUE

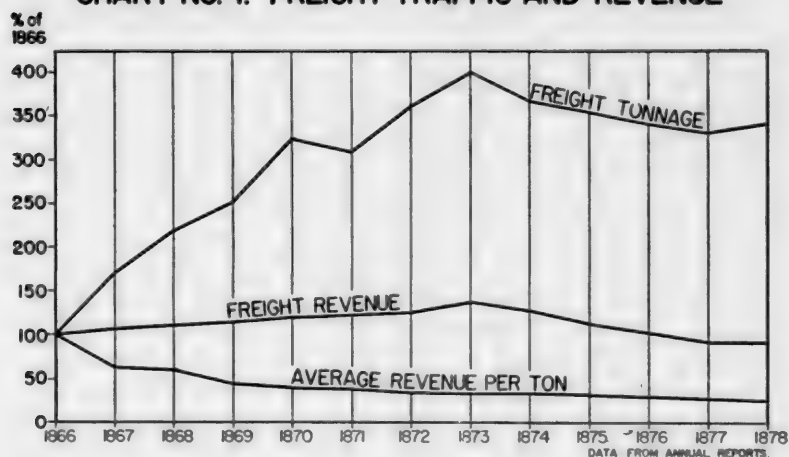
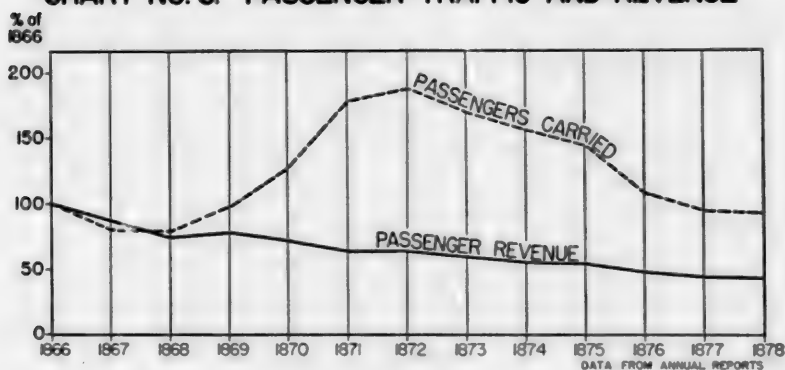


CHART NO. 5. PASSENGER TRAFFIC AND REVENUE



easily carry western cereals and meat to the eastern ports and then transship by water to Charleston, the better condition of the northern railroads and the cheapness of water transportation giving the northern routes a distinct advantage over the southern ones.

In 1868 southern railroads interested in the western trade organized the Green Line to carry western traffic into the South.

Atlanta was supposed to be the southern end of the Green Line, for beyond that point the sea routes had the advantage. However, the South Carolina Railroad and other seaboard lines tended to accept almost-profitless competitive rates on Green Line traffic and kept a few cars in the line.

Eastern merchandise traffic (manufactured goods distributed through Charleston) was profitable, for it moved at high rates, but the volume was small. Cotton traffic was also profitable, especially the local shipments into Charleston, and its volume was considerable. However, intense competition developed in carrying the more remote cotton of Georgia and other areas to distant markets. The movement was mainly from the interior to the South Atlantic ports by rail and thence to eastern ports or to Europe by water. Not much cotton moved by rail to North Atlantic ports.

A rapid growth of rival interior trade centers and overexpansion of the rival railroads which served them precipitated a condition which in the commercially distressed seventies brought financial disaster to southern railroads. With the reckless use of the states' credit, uneconomic lines were built, and the South found itself with more railroads than its traffic could well support. As the number of competitive points and competitive routes multiplied, competition for such traffic as there was became reckless and violent. The railroads reduced rates only when forced to do so by competition, so rates on local traffic declined little. The public was not appreciative of the railroads' desperate need and roundly denounced them for charging high rates, for money was scarce and the local rates looked excessive in comparison with the low competitive through rates. The South Carolina Railroad, like the others, had to face public ill will and to defend itself against the charge that it was discriminating against local traffic and local needs.

To have yielded to these complaints would have meant bankruptcy. The remedy lay, rather, in co-operative action to maintain remunerative through rates. Conventions of freight agents repeatedly made agreements on rates, but these agreements were repeatedly broken, and cut-throat competition was resumed each time.

It is interesting to observe the South Carolina Railroad Company's reaction to competition. As early as 1866 the president complained of diversion of business, "from its accustomed channels," to Savannah and Portsmouth, but the company remedied the situation by improving its facilities for sea transportation at Charleston.²³ In 1868

²³ *Proceedings of the Stockholders of the South Carolina Railroad Com-*

there was complaint that the company had to "contend against a vigilant and vigorous opposition at every important point."²⁴ In 1869 sharp competition brought loss of traffic and reductions of passenger fares and freight rates.²⁵ In 1870 President Magrath noted "the extraordinary policy of some of our competing lines, of forcing rates down, and insisting upon keeping them down, below the requirements of legitimate business."²⁶

In 1871 Magrath remarked: "... we are ... ready and determined to protect ourselves and our connexions, and maintain our tonnage."²⁷ The only way this could be done in the face of bitter competition was by reckless rate-cutting. In the fall of 1872, reported Magrath, a large part of the company's fall transportation to the West was sacrificed²⁸

in a bitter contest for the control of the business ... not to be surrendered to any one except with disastrous consequences. The South Carolina Railroad was withheld from any participation in this Railroad war, until forced in self-protection, to become a party to a proceeding not justified by sufficient causes, or excused by reasonable expectation of benefit to the parties who commenced it. Our loss ... cannot be estimated at less than \$30,000.

Rate-cutting was an activity in which each participant commonly and in all honesty thought the other fellow to be the aggressor, for shippers successfully played one railroad off against another. The initiative was left to remote subordinates, and the top officials had no way for judicious ascertainment of the facts. If the South Carolina Railroad was not the aggressor in rate-cutting, it was not the

pany, and of the South-Western Railroad Bank, at their Annual Meeting in the City of Charleston, on the 12th and 13th February, 1867 (Charleston, 1867), p. 16.

²⁴ *Annual Reports and Statements of the South Carolina Railroad Co. for the Year Ending December 31st, 1868 (Charleston, 1869), p. 2.*

²⁵ *Proceedings of the Stockholders of the South Carolina Railroad Company, and of the Southwestern Railroad Bank, at their Annual Meeting, in the City of Charleston, 8th and 9th February, 1870, with the Annual Reports and Statements of the South Carolina Railroad Company, for the Year ending December 31st, 1869 (Charleston, 1870), p. 15.* Passenger fares were reduced in Nov., 1869, from 5 to 4 cents per mile.

²⁶ *Proceedings of the Stockholders of the South Carolina Railroad Company, and of the Southwestern Railroad Bank, at the Adjourned Meeting, 3d May, 1870, and at their Annual Meeting, in the City of Charleston, on the 14th and 15th February, 1871 (Charleston, 1871), p. 18.*

²⁷ *Annual Reports and Statements of the South Carolina Railroad Company for the Year Ending December 31, 1871 (Charleston, 1872), p. 2.*

²⁸ *Proceedings of the Stockholders of the South Carolina Railroad Company and of the Southwestern Railroad Bank, at their Annual Meeting, in the City of Charleston, on the 8th and 9th April, 1873 (Charleston, 1873), p. 1.*

fault of its management, whose policy was to get business, no matter how.

In 1874 Magrath said he had to "meet a competition for our business, so conducted as fitly to describe it, would be offensive. . . ." "To meet it," he said, "the Board has sometimes been called upon to exert their utmost energies, but confident of its temporary character, and with an implicit faith in the power and resources of our great Road, they have not for a moment doubted of success. . . ." ²⁹

The assumption seemed to be that the South Carolina Railroad could outlast competitors at the business of rate-cutting. The fallacy of this was that the most dangerous competitor of all in the railroad business was a bankrupt one, free from the necessity of meeting the ordinary obligations of a solvent corporation.

A comprehensive solution of the rate and traffic problems of the Southeast was attempted in 1875 by the organization of the Southern Railway and Steamship Association under the leadership of Albert Fink. Rates on cotton and the eastern merchandise traffic of Atlanta and Augusta, the worst trouble-spots of competition, were fixed by agreement, and each traffic route was assigned a percentage of the traffic. Roads carrying more than their quotas were required to pay cash balances to the other members of the pool. The arrangement was rapidly extended to other competitive points, and a very elaborate pooling arrangement was developed. The South Carolina Railroad profited from the arrangement and then, from narrow thinking and lack of vision, it almost broke up the association by refusing to pay its balances. The association did not quickly stop rate wars, and one of the early disturbing factors was the South Carolina Railroad, the management of which was both local-minded and financially desperate. The company was made to pay its obligations to the pool only by the force of a combination of its competitors and connecting lines.³⁰

The association gradually managed to bring order out of chaos and to stabilize competitive rates by the late seventies, too late to do the South Carolina Railroad much good. As late as 1877 Magrath

²⁹ *Annual Reports and Statements of the South Carolina Railroad Company for the Year ending December 31st, 1874* (Charleston, 1875), p. 8.

³⁰ "Proceedings of the Convention of Southern Railroads and Steamship Lines held at Atlanta, June 30, 1875," in *Circular Letters of the Southern Railway and Steamship Association*, XXI (Series of 1886-87), 1655-56; telegram of Joseph E. Brown, President of the Southern Railway and Steamship Association, to the presidents of member lines, July 8, 1875, *ibid.*, p. 1665; "Proceedings of the Convention of Southern Railroads and Steamship Lines held in Atlanta, July 22, 1875," *ibid.*, p. 1667.

was complaining that cotton was being brought from Macon and Atlanta to Charleston at 25 cents per hundred pounds, as against a standard rate of 55 cents, and from Augusta at 50 cents per bale, as against a standard rate of \$1.25.³¹ This last item shows that the bankrupt Port Royal Railroad and the Savannah and Charleston Railroad were undercutting the South Carolina in the rates most vital to it (see map).

THE SHRINKING CHARLESTON ORBIT

The importance of the connections at Augusta and Columbia to Charleston and to the South Carolina Railroad is shown by the fact that in 1874 the railroad carried to Charleston 343,786 bales of cotton, of which 126,445 came from Augusta, 148,911 from Columbia, 19,262 from Camden, and only 49,168 from local stations.³²

STATISTICS OF IMPORTANT COMMODITIES HAULED TO CHARLESTON BY THE SOUTH CAROLINA RAILROAD

Year	Bales Cotton	Barrels Flour	Bushels Grain	Barrels Naval Stores	Bales Merchandise	Heads Cattle
1865	35,536	—	7,424	1,293	2,523	381
1866	94,097	2,495	20,293	10,923	5,150	4,103
1867	155,455	10,948	93,062	11,912	12,857	6,187
1868	184,544	5,830	801,284	17,093	16,256	3,020
1869	206,284	13,438	165,395	23,254	14,661	8,516
1870	246,679	23,821	61,676	17,551	15,950	5,163
1871	262,701	22,206	69,911	17,571	17,399	10,202
1872	264,625	30,150	105,952	37,671	30,368	15,094
1873	328,904	52,057	143,319	50,381	38,024	14,417
1874	343,786	72,659	218,427	48,956	25,294	12,597
1875	296,245	58,345	171,776	43,872	24,375	12,133
1876	336,814	71,330	371,166	52,185	15,456	9,696
1877	287,765	50,223	279,956	56,480	15,438	9,642
1878	344,652	61,468	231,860	53,921	15,217	12,500

SOURCE: Data from *Report of President and Directors of the South Carolina Railway Co. December 31st, 1884* (Charleston, 1885), p. 27. The annual fertilizer tonnage (mostly shipments out of Charleston) averaged about 35,000 during the 1870's.

³¹ *Annual Reports and Statements of the South Carolina Railroad Co. for the Year Ending December 31st, 1877* (Charleston, 1878), p. 4.

³² *Annual Reports and Statements of the South Carolina Railroad Company for the Year ending December 31st, 1874* (Charleston, 1875), Table A, folded in back.

A study of freight traffic revenues reveals further the importance to the company of Charleston and its trade with Augusta and Columbia. For example, the revenues of 1876 were as follows: ³³

On traffic originating or terminating at Charleston	\$685,042.01
On traffic passing through Charleston	170,068.22
On business outside of Charleston	52,396.14
	<hr/> \$907,506.37

The smallness of the business outside of Charleston appears especially striking when it is realized that it includes that of the local market areas of Augusta, Columbia, Camden, and the smaller places, which were also partly tributary to Charleston.

Revenues on freight traffic into, out of, and through the Charleston terminal in 1876 were as follows: ³⁴

Up-Freight	
Charleston to Augusta and beyond	\$116,192.71
Charleston to Columbia and beyond	92,123.40
Charleston to local stations	124,111.75
	<hr/> \$332,427.86
Down-Freight	
Augusta and beyond to Charleston	\$170,429.14
Columbia and beyond to Charleston	184,764.11
Local stations to Charleston	167,489.12
	<hr/> \$522,682.37

The smallness of the business outside of Charleston and the comparative smallness of the business through Charleston show clearly the identity of the South Carolina Railroad's interest with that of the merchants of Charleston. It is obvious why they stood together. The figures show clearly, too, why the company was willing to climb far out on a financial limb to control the Macon and Augusta and the Greenville and Columbia railroads as feeders to its traffic.

Notable trends in the succeeding years were the increase in the local trade of both Charleston and the other centers and the decline of traffic passing through Charleston. That city was becoming more and more completely a center for the trade of a limited area, and Augusta and Columbia were growing in the strength of their rivalry in the edges of the territory. Much of Charleston's former western trade was diverted through the rival port of Savannah by the aggressive Central Railroad and Banking Company of Georgia, which

³³ *Charleston News and Courier*, April 10, 1877.

³⁴ *Ibid.*

in 1881 leased the Georgia Railroad. There were other diversions through Wilmington and Norfolk and over a variety of new routes to the East. The South Carolina Railroad was settling into its local niche. Discouragement must have pervaded everything it did.

Although the company never failed to show a profit, its financial difficulties grew as the years passed. It spent money to repair the war damage, pay off the Southwestern Railroad Bank's obligations, buy control of connecting lines to thwart competitors, improve docking facilities at Charleston, develop coastwise steamship service, and expand its facilities to handle the heavier tonnage offered. However, competition grew and rates declined, so that any increase in net earnings in response to the added capital investment was hard to detect. The company's financial burdens were increased without corresponding benefits. Net income was swallowed up and debts grew. Had capital been available for the purchase of the company's securities, the situation would have been difficult enough, but capital in South Carolina had been largely wiped out, and obtaining it from the North or from Europe was difficult. Anxieties over the renewal of the sterling debt by substitution of new state-guaranteed bonds were prolonged by complications of conflicting interests and misunderstandings and by the machinations of the Radical Republican party.

FINANCIAL TROUBLES

The policy of paying dividends was ended in 1871, when heavy investment in connecting lines added to the company's financial burdens and brought a rapid increase in the floating debt. From 1871 through 1874 heavy serial maturities of the domestic bonds burdened the treasury and increased the floating debt still further.

In urgent need of money the company, on October 1, 1872, issued \$3,000,000 of thirty-year, 7 per cent, second-mortgage bonds. These were sold at 75, two-thirds payable in non-mortgage bonds of the company and one-third in cash. Of these, \$521,500 worth were sold in 1872, retiring \$347,000 of the non-mortgage bonds. In 1878 the amount of the second-mortgage bonds outstanding was \$1,206,500.³⁵ These bonds moved slowly because of the severe business depression.

Desperate for funds with which to pay off its maturing non-mortgage bonds and meet its other obligations, the company paid very high interest rates on its floating debt and began to pledge the

³⁵ *Annual Reports and Statements of the South Carolina Railroad Co. for the Year Ending December 31, 1877* (Charleston, 1878), p. 7.

unsold second-mortgage bonds in order to secure that debt.³⁶ In the spring of 1877, when it appeared that the company could hold out no longer, several of its directors, citizens of Charleston, obtained on personal credit \$200,000, which they loaned the company, taking as security practically everything in sight, including \$789,000 in bonds and coupons, and stocks of \$2,000,000 par value. They assigned themselves all the net income (after charges) of the company.³⁷ This arrangement exhausted the resources of the railroad and was kept secret. Desperately hoping for the tide to turn in the financial situation, the company held out until April, 1878, when it defaulted in the payment of interest on its second-mortgage bonds. In July it also defaulted on the sterling bonds.³⁸ After frantic efforts by the company to induce creditors to scale the debt, a receiver took over the property on October 1, 1878.

THE SEEDS OF FAILURE

Charleston interests had lost control of the South Carolina Railroad. Perhaps more important for Charleston, the company lost its investment in and control of the Macon and Augusta and the Greenville and Columbia through the bankruptcy of those companies. Perhaps it mattered little anyhow now who controlled the South Carolina Railroad, for, while it remained in operation and continued to carry local traffic in and out of Charleston, the dream of Charleston as the great emporium of the South and West was gone — the substance had really been gone long before the Charleston dreamers realized it. Charleston had lacked the financial and commercial strength to support its ambitions in the face of aggressive opposition from all sides, and the city was now no more than an important local trade center, on a par with many others in the South.

Why had the company failed? Reasons may be found in war damage and inflation and in the devastation that afflicted the South in the years after the war, destruction of the productive enterprise and the labor system which produced the section's surplus for export, weak and corrupt government which aided rival trade centers and railroad promoters to build uneconomic competing lines, destruction of southern capital, and the fierce and unbridled competition between railroads which followed overbuilding. The general

³⁶ *Charleston News and Courier*, Sept. 9, 1878.

³⁷ *Ibid.*, Sept. 10, 1878.

³⁸ *Ibid.*, Sept. 9, 1878.

financial disaster of the seventies was more than the financially weak company could stand — even though it was apparently managed with honesty and always showed an annual profit.

Could wiser management have prevented failure? The company might, perhaps, have avoided investments in the Macon and Augusta and the Greenville and Columbia, and it might, perhaps, also have avoided paying dividends in 1870 and 1871. But to have done so it would have had to become resigned to a local business and to have abandoned its role as the bright hope of Charleston. Bankruptcy loomed in that direction too. Acceptance of such a policy would have reduced its business drastically and would have cost it the devoted support of Charleston bankers, who sustained the company as long as they could, and would have encouraged the stockholders to sell out at a sacrifice to outside interests, supposedly anxious to divert trade away from Charleston.

The management's great failure was in its narrowness of view and lack of foresight in matters of competition and traffic. President Magrath failed to understand the causes of rate-cutting and the full meaning of the conditions of competition. Nevertheless, even if he had had the grasp of the situation shown by Albert Fink of the Louisville and Nashville or William M. Wadley of the Central of Georgia, the result would presumably have been the same, for the adverse influences facing the South Carolina Railroad in the years after the war presented obstacles too great for the management to surmount.

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The Beginnings of the Money-Back Guarantee and the One-Price Policy in Champaign-Urbana, Illinois, 1833-1880

« The widespread advent of money-back guarantees and one-price policies were symptomatic of a major transition in merchandising history. As trade grew and retail stores multiplied, standardization of terms and practices became apparent. Before 1864 Champaign-Urbana merchants had made little progress in developing a policy of standard prices. The postwar years brought increasing competition at the retail level, and the use of the money-back guarantee spread. When this practice became widespread, a one-price-to-all policy became essential. Some old-time merchants continued to haggle with customers, and barter trade in country produce created complications, but by the early 1870's the integration of one-price policies and money-back guarantees had been generally accomplished and the way paved for the advent of mass distribution.

INTRODUCTION

Today, shoppers select merchandise from a wide range of goods in well-defined price lines. Goods purchased, in most stores, are returnable with one's money back, if unsatisfactory. Purchasers are reasonably confident that the prices paid at any time will be the same for all buyers. The "money-back" guarantee and the "one-price policy," the theme of this article, may be found as far back as the eighteenth century.

In 1777 a "money-back" guarantee was made in an advertisement by the founders of the Walter F. Baker Cocoa firm. The guarantee stated that ". . . if the chocolate does not prove good, the *money* will be returned."¹ And as early as 1712 it was said of John Morton, a London merchant, "He imposes upon himself a rule of affixing the value of each piece he sells, to the piece itself; so that the most ignorant servant or child will be as good a buyer at his shop, as the

¹ Frederic A. Russell and Frank H. Beach, *Textbook of Salesmanship* (New York, 1949), 45n. (Italics added.)

most skilful in the trade."² Morton was practicing the "one-price policy."

The "money-back" guarantee and the "one-price policy" also made separate and transitory appearances in this country during the first half of the nineteenth century. Later in the century these became established practices. Highly capitalized retailing necessitated sustained volume. Keeping the customer's good will called for confidence in the retailer and in the goods he sold. Some early mass distributors commenced to curry that confidence with guarantees. Some were satisfaction guarantees, which implied that the merchant would replace unsatisfactory goods. When the "money-back" warranty was added, the "one-price policy" had to follow.

Potter Palmer of Chicago was among the early merchants to combine the "money-back" guarantee and the "one-price policy." An advertisement of his in 1861 reads as follows: "Purchases made at my establishment that prove unsatisfactory either in *price*, quality or style, can be returned (to the cashier's desk) for which the purchase money will be with pleasure returned."³

Palmer's categorical guarantee of "money-back" was also saying that his firm would not discriminate in price between customers. Anyone discriminated against in the matter of price would probably find the goods unsatisfactory, if he became aware of the discrimination.

These ethical business practices were initially used in major cities, but not much time elapsed before the stores of lesser cities and even of small towns commenced to employ them as competitive devices. This article proposes to trace these developments in Champaign-Urbana, Illinois. The basic questions are: When did the "money-back" guarantee and the "one-price policy" appear in the Twin-Cities of the Grand Prairie? When and why were they united as regular commercial practices? They appeared and disappeared sporadically between 1853 and 1871. They reappeared jointly in 1872, and have remained among the keystones of better business ethics since that time.

The money-back guarantee and the one-price policy in Champaign-Urbana developed during the period 1833-1880. In the history of the two towns this era divides into four rather distinct periods: (1) Urbana, a pioneer community, 1833-1852; (2) Urbana and West Urbana (Champaign after 1860), early railroad towns,

² *Spectator* (London), Nov. 26, 1712.

³ *The Chicago Tribune* (Chicago, Illinois), Nov. 26, 1861. (Italics added.) Palmer's firm eventually became Marshall Field & Co.

1853-1863; (3) Champaign-Urbana, the transition period 1864-1871; (4) the Twin-Cities, cultural and agricultural center, 1872-1880.

A brief sketch of the pioneer community will establish a frame of reference for the development of the money-back guarantee and the one-price policy in the subsequent eras.

Champaign County and the county seat, Urbana, commenced their constitutional lives in the year that Chicago was founded - 1833. Those few items that the early settlers could not grow, spin, or build had to be acquired outside Urbana until November, 1833, when the commissioners granted Isaac H. Alexander the initial license to operate a business in Urbana. For a fee of \$5.00 he was permitted to retail *goods, wares, and merchandise*.⁴

Ten years later, in 1843, when Winston Somers and his family arrived in Urbana, they found only twelve houses and cabins; and in 1851 (eighteen years after the founding date) William Radebaugh reported only twenty.⁵ The pulse of the community quickened as that year ended. Ground was broken in Chicago on December 23, 1851, by the Illinois Central Railroad Company, and iron rails commenced to push south toward Urbana. The coming of the railroad ushered in a new era for Urbana.

The new era marked the beginning of modern economic development in the area. A survey of available contemporary newspaper advertising from other towns in comparative stages of development, moreover, indicates that the Urbana (later Champaign-Urbana) pattern was repeated again and again. Merchants were forced by competition to adopt policies and practices that would attract and hold customers. The first warranty of merchandise was made in Urbana in 1853, a year of excitement and expectation.

1853-1863

In 1853 Urbana was still a frontier village of seventy-five buildings. The merchants of the town included a druggist, two grocers (one with a connected bakery), a hardwareman, and the operators of four general stores. Services included a tailoring shop and the *Urbana Union*, which first appeared September 25, 1852.⁶

⁴ County Commissioners Court Record, *Record Book A* (Urbana, Illinois), Nov. 7, 1833.

⁵ J. McLean, *Pioneers of Champaign County* (Urbana, 1881), cf. pp. 56 and 28.

⁶ Cf. Natalie Maree Belting, *Early History of Urbana-Champaign to 1871* (Thesis, University of Illinois, Urbana, Illinois, 1937), 49.

There were mixed emotions in Urbana when the news came that the railroad was following the fourth survey, which bypassed Urbana two miles to the west of the Court House. Shortly after this decision ". . . the Illinois Central requested Thomas H. Perry, the deputy county surveyor, to lay out a 'Railroad Addition to Urbana,' and this plat was certified and recorded June 5, 1853."⁷ Any survey disappointments of the spring and summer were dissipated in a flurry of commercial activity in the fall of 1853 and the following spring ". . . when gangs of men, recruited from all over the country, began to appear on the northern horizon, grading, building culverts, and laying a long thin path of iron."⁸ A new era had begun.

The merchants of Urbana began to display the first signs of genuine competition. Culver & Geres, ". . . at the old stand of J. & J. S. Gere, in Urbana (July, 1853) are now receiving a large and well selected stock of Dry Goods, Groceries, READY-MADE CLOTHING, Hardware and Cutlery, Queensware, . . . in short everything else to be found for sale in retail stores . . . [And] we are determined to sell and sell quick (*sic*), so as to go soon for another supply."⁹ Substantiating their sales policy, Culver and Geres included the prices of brown sugar, "a good article"; coffee, "an excellent article"; and yard goods. The inclusion of prices in the advertising copy is mentioned here because prices appear only three times in retail advertising in the local newspapers during the following twenty years. Culver and Geres cited their terms to be only cash or barter, because ". . . our profit will not justify ink and paper in keeping accounts."

As an added lure to the consumers in the expanding county seat, Culver and Geres added ". . . ANOTHER INDUCEMENT! We have employed accommodating gentlemanly young men (with) savory speech and sprightly appearance. Beautiful boys! Who wait on our customers with much pleasure, so just call right out to the boys for anything you want when you are in the store."¹⁰

In the same issue of the *Union*, Gessie & Sherfy announced the opening of their new general store. This announcement carried a policy statement which perhaps marks the initial warranty of merchandise in Urbana. The copy read as follows: ". . . it will ever be

⁷ *Ibid.*, 51.

⁸ *Ibid.*, 50.

⁹ *The Urbana Union*, A weekly Journal, "Independent in Everything and Neutral in Nothing" (Urbana, Illinois), Thursday, July 21, 1853.

¹⁰ *Ibid.*

their aim to render *entire satisfaction* to all who may favor them with their patronage THE CASH SYSTEM is the one upon which they will operate . . . so that every one can rely upon getting cheap goods at it If anything they sell is not as good as it is recommended to be, *they will make it satisfactory* All kind(s) of country produce will be taken in exchange for anything they have to sell" ¹¹ This medium was common for much of the consumer purchasing until the development of specialized retailing after the Civil War and the parallel growth of produce merchants.

Two residences were built in the new village of West Urbana in 1853. Commercial activity began two years later when two dry goods stores, a tin shop, and a hotel were opened for business. A grocery store opened the following year.

Gardner & Morris, one of the dry goods stores, used the following copy as part of their first advertisement. "We are aware that previous to this prices have been high and profits enormous but that time has passed; extortion has breathed its last" ¹² The other dry goods firm, J. C. Baddeley & Co., making its opening announcement in the same issue of the *Union*, appealed for a "fair trial," and felt that it could give *entire satisfaction*. Baddeley's terms were strictly cash or country produce. However, after a year of operation under these rigid terms, the following appeared, in footnote style, in the firm's regular advertising copy: ¹³

Special Notice is . . . hereby given to all whom it may concern; that all notes, accounts and demands whatever, due to us may be adjusted forthwith as we must have the money.

As advertised, the terms of retail sales in both Urbana and West Urbana were invariably cash and country produce (barter), but charge accounts were being both used and abused. For example, Clapp & Geres, Urbana (successor to Culver & Geres), advertised as follows in 1857: "Notice. — Change of firm and change in mode of doing business. The Cash System Adopted! The Credit System

¹¹ *Ibid.*, July 21, 1853. (Italics added.)

¹² *Ibid.*, Feb. 8, 1855.

¹³ *Ibid.*, Feb. 14, 1856. Four months later, June 19, 1856, and continuing regularly until Aug. 5, 1858, the Baddeley firm carried the following postscript in its advertising in the *Union*: "Strictly for cash, They having entirely abolished the credit system."

Abolished!!! Positively no more goods sold on time."¹⁴ Legal notices of bankruptcy, disappearances of firms, and the forming of new partnerships attested to the hardships imposed upon the merchants by unpaid accounts. The scarcity of money, lack of quick cash crops, and the long growing time of grain crops imposed limits on the amount of cash buying that was possible. The retailer was placed in a weak bargaining position with his suppliers, but exercised a strong position over his customers. When the buyer is weak, the terms are harsh. These credit problems delayed the arrival of more ethical practices.

The Hill and Smith general store advertisement in *Our Constitution*, March 7, 1857, offered the first published warranty since 1853 and the second in the twenty-four years of commercial life of Urbana. "Watches and clocks, for sale, warranted . . . Give us a call and you will be satisfied."

Continued use of such copy as "Cheap at cash rates, or Country Produce . . ." further pointed to the poor bargaining position of the consumers that were forced to ask the merchants to "put it on the tick." The produce was easily converted into money. There was a ready market in Chicago for any surplus farm produce. Daily trains to Chicago by 1860 made this market even more dependable. Exchange became so important that J. J. Dunlap & Co. constructed a building to handle the produce. "All kinds of country produce taken in exchange for goods at the highest market price. Exchange building, Corner Main and Race Sts., Urbana, Illinois."¹⁵ Two factors acted to control the prices offered for produce by Dunlap and other budding produce merchants — the prices offered in Chicago and the extent of competition among buyers locally.

As yet, little had been done by the merchants to develop a policy of firm prices. The marked price on merchandise usually meant the starting price for bargaining. S. Bernstein typified this practice in his advertisement which read, "Removed from Urbana to Champaign, I will positively sell very cheap for cash, without regard to cash mark, in order to make room for an immense stock No

¹⁴ *Our Constitution* (Urbana, Illinois), Jan. 3, 1857. Another plea for settlements of overdue accounts took the following approach in the *Union*, May 21, 1857: "We have a good business lot, opposite the two story brick building north, on which we would like to build a store room, but cannot unless some of our friends who are indebted to us will pay up." This was signed by J. J. Dunlap & Co., Urbana, Illinois.

¹⁵ *Urbana Clarion* (Urbana, Illinois), Feb. 25, 1860. Perhaps some of the creditors answered their plea and paid-up. (See footnote 14.)

trouble to show goods.”¹⁶ The disregard for the cash mark was repeated in December of 1862 (and thereafter). Bernstein was indicating that every deal was individually negotiated and the cash buyer would benefit. “Last years prices. Having bought his entire stock very Low For Cash, and is selling on the same terms . . . NOT TO BE UNDERSOLD BY ANYONE . . . S. Bernstein, P. S. Cash Paid for Coon and Mink Skins.”¹⁷

1864-1871

This transition period witnessed better business practices as a result of increased competition. Northern victories in July of 1863 marked a turning point in the Civil War. Distribution channels began to fill, as production capacity expanded or was released from making war essentials. The revived and extended use of warranties and guarantees, the publication of prices, and the efforts to develop a one-price policy, suggest an era of intense competition.

Between 1857 and 1864 there had been no genuine guarantee of products, services, or consumer satisfaction. However, these appeared in clusters during the next period. There was a small epidemic of guarantees in the immediate pre-election months of 1864. Offering them were a jeweler, a blacksmith, and a dentist.

The Zerse Brothers, who operated the “New Jewelry Store,” guaranteed their watchmaking skill with “All Work Warranted” in their advertisements.¹⁸ W. L. Andrews — BLACKSMITHING & REPAIRING DONE — “. . . invites farmers and others to bring their broken and defective machinery, or other work to his shop, *Guaranteeing* perfect satisfaction.”¹⁹ A week later a dentist, O. F. Brittain, initiated a series of advertisements in this same vein. His copy read, “Entire *satisfaction guaranteed* in every case, or *no charge* will be made . . . His work is *warranted* to be as fine as any gotten up (*sic*) in the West.”²⁰

A furniture store, an agricultural implement company, and the agent for a washing machine was the roll call of institutions that

¹⁶ *Democrat*, July 10, 1862. (Italics added.)

¹⁷ *Champaign County Patriot* (Urbana, Illinois), Dec. 10, 1862. (Italics added.) R. M. Eppstein & Brothers opened in Champaign on Oct. 14, 1864, with an advertisement in *The Central Illinois Gazette*, which, likewise, typified the no-price policy. “Will not be undersold and defy Competition . . .”

¹⁸ *Central Illinois Gazette* (Urbana, Illinois), Oct. 21, 1864.

¹⁹ *Ibid.* (Italics added.)

²⁰ *Ibid.*, Oct. 28, 1864. (Italics added.)

offered varying types of guarantees during 1865. G. Irvine, an Urbana furniture dealer, entered the first advertisement guaranteeing satisfaction in his industry.²¹

Probably the most uncompromising guarantee, up to 1866, was that made by the J. M. Davis & Co., the sole agent for Johnson's Union Washing Machine. His copy read, "We warrant the machine to give satisfaction every time or money refunded."²² This was the first genuine money-back guarantee.

In 1866 two more firms entered the growing list of companies which were assuming some responsibility for the value of their products. One of these firms was a jewelry store and the other was a lumber and millwork company. Both gave clear-cut warranties.²³

Offers of free delivery of groceries and some other classes of goods commenced to appear regularly in the advertising of 1866. The Urbana-Champaign Rail Road made ten round trips daily between the Twin-Cities until March, 1867. It was then replaced by ". . . a new street railroad company. A new line was constructed between the Court House in Urbana and the Champaign business district to replace the old road Cars ran every half-hour."²⁴ The Illinois Central advertised two north- and two south-bound passenger trains daily. Every added shopping convenience not only made it easier to buy, but also improved communications between the twin communities and outside communities. Cash customers were showing impatience at irregularities in pricing and certain other long-accepted commercial practices. Likewise, country produce was taken to the retailer offering the highest trade value, which forced some uniformity of prices and services.

During 1867 a dry goods firm, Benight Brothers, and a drug store, H. Swanell, commenced to advertise satisfaction guaranteed.²⁵ No more of such advertising was initiated in 1868, but the following year the first "money-back" guarantee for products sold through a retail store was made. C. B. Whitmore, a retail and wholesale grocer, quoted price ranges on sugar, coffee, tea, syrup, dried apples, etc. Different grades or qualities were offered. He may have been hedging his prices with the different classes of buyers — cash, trade or charge — his warranty. "Cash customers can buy at a very

²¹ *Ibid.*, July 25, 1865.

²² *Ibid.*, Nov. 24, 1865. (Italics added.)

²³ *The Union and Gazette*, April 13, 1866, and *passim*.

²⁴ Belting, *op. cit.*, 87.

²⁵ *The Union and Gazette*, Dec. 25, 1867.

close figure and all goods warranted. If not suited, the *money* will be refunded."²⁶

H. A. Collier's Boot and Shoe Store, on the corner of Church and Neil streets, claimed to be giving the greatest bargains ever offered in boots and shoes. He introduced a new vernacular and substantiated his claim with ". . . we warrant everything we represent, No Humbug! No Misrepresentation! . . . we will sell cheaper . . . , and now have extraordinary inducement."²⁷ (Special inducements, which were frequently included in the advertisements, may have been rewards for paying the full asking price.)

Published prices appeared only three times in newspaper advertising in Champaign-Urbana, Illinois, during this transitional period. The first time was in December of 1865. It was a grocery and provisions store advertisement, with a theme demonstrating how much a dollar would buy in this store. The copy read in part:

\$1 will buy 3 lbs. of coffee at
S. A. Jenks'

\$1 will buy 8 lbs. of rice at
S. A. Jenks'

The articles in the page-long, "\$1 will buy . . . ," advertisement included plug tobacco, pine salt, coal oil, smoking tobacco, soda, candles, mackerel, salt, white fish, flour; and concluded, ". . . \$1 will buy as many groceries at S. A. Jenks' as at any other store in the country."²⁸ This was the second time prices were published for a retail firm in the trading area, and it marks the first grocery advertisement with prices of the products included.

On March 29, 1867, the firm of James Dunlap in Urbana quoted prices of calicos and sheeting; then proceeded to list more than a dozen other yard goods type items without prices. These items were allegedly "newly arrived goods."²⁹ On March 24, 1869, Grocerman Whitmore published prices in his money-back guarantee in the *Champaign County Gazette*.

On May 4, 1866, the following advertisement appeared in the *Union and Gazette*, which was repeated weekly until the following October 5.

²⁶ *Champaign County Gazette* (Champaign, Illinois), March 24, 1869.

²⁷ *Ibid.*, May 19, 1869.

²⁸ *The Central Illinois Gazette* (Urbana, Illinois), Dec. 8, 1865.

²⁹ *The Union and Gazette* (Urbana, Illinois), March 29, 1867.

New York
ONE PRICE
Cash Store
Eichberg & Bros.

Go to the New York One Price —
Cash Store for —
Bargains
For
Dry Goods — Carpets
Oil Cloth, Window Shades

ONE PRICE —
Cash Store
Main St., Champaign.

The name One Price was deleted from the advertising after October 5, 1866. The name New York was also deleted until December 7, 1866, when the firm again advertised Eichenberg(h) & Brothers' New York Store. No prices were advertised and no warranty was hinted. The copy of the advertisement did not vary one word during the five months.

The following May (1867), a genuine one-price policy was suggested. It read, in part, ". . . and all desirous of goods at exceedingly low prices where strictly *One Price Only* is maintained . . . Eichenberg & Bros." ³⁰ However, this copy ran one issue only; then the identical advertisement used for five months in 1866 ran again weekly for several issues.

A grocery and provisions retailer, E. Tulley, published an advertisement in the *Gazette and Union*, November 18, 1868, calling his firm the "ONE PRICE GROCERY AND PROVISION STORE." He showed a policy of uniform treatment for both cash and barter with ". . . Fresh butter, eggs, poultry, bacon and lard taken in exchange for groceries at Cash Prices. Full Weight and Measure given, and 'No Playing Sharp.' Goods Delivered Free of Charge." Tulley re-ran this copy on January 6, 1869, but in his next advertisement (*Gazette*, May 19, 1869) appearing four months later (a plea for settlement of accounts) he had deleted ONE PRICE from the firm's name. Apparently Tulley had abandoned the attempt to establish a one-price store.

Disastrous fires now retarded the development of both communities. Champaign's business district sustained a loss of twenty-six

³⁰ *Ibid.*, May 1, 1867. (Italics added.)

buildings in the summer of 1868, and Urbana's fire loss was contemporary with the Great Chicago fire — October, 1871. The fires destroyed the old landmarks of pioneer days. They marked the end of another era. The frontier was far beyond, and the Twin-Cities of the Grand Prairie were no longer a part of the Pioneer West.

Champaign-Urbana had a combined population of 6,929 in 1870. The trading area had become the home of the Illinois Industrial University. Civic improvements were hard pressed to keep astride. "Street lights began to appear in Champaign in 1868 . . . individual business men paid the cost of installing and caring for coal oil lamps in front of their stores. Later . . . lamps were provided for the center of the town (street lights for common use), but it was not until gas was piped into the city (both Champaign and Urbana) that street lights were really street lights. . . (this was accomplished) the week before Christmas, 1869."³¹ The Great Western Telegraph Company completed the stringing of a telegraph line from Chicago to the Twin-Cities in 1869.

1872-1880

If any single firm had to be selected as the one contributing the most to the establishment of high ethical standards in the Twin-Cities, the Philadelphia Store would rank high as the candidate. This store brought an integrated and unified marketing policy to Champaign-Urbana. The *Gazette*, April 3, 1872, announced the opening on April 10 of Scott & Willis' "The Philadelphia One Price Family Dry Goods Store" which advertised "*Satisfaction Guaranteed to Every Purchaser, All Goods Marked in Plain Figures and One Price.*" On the front page of the same issue of the *Gazette* the following article appeared: "New Firm. — Messers. Scott and Willis this week appear before the public and take a place among the business men of this city. They hail from the model city of Philadelphia, but having cast their fortunes here, expect to be with us and for us (*sic*). May they meet with a cordial reception and the support and patronage their way of doing business merits. They are located at No. 7 Main St., . . . As will be seen from their posters and advertising, they mean business and intend that their campaign for public favor shall begin at once. . . ."

On April 10 the following advertisement was printed in the *Gazette*:

³¹ Belting, *op. cit.*, cf. pp. 83-84.

NEW STORE — NEW GOODS!
 THE PHILADELPHIA ONE PRICE FAMILY
 DRY GOODS STORE
 Will Open Today, April 10th,
 With an Entire New Stock of
 Dry Goods and Notions. All New Designs and Patterns
 Fresh From The East.
 Bargains In All Fashionable Styles of Dress Goods
 Shawls, Etc., Etc.
 Domestics At Cost
 Notions, Trimmings And All Small Wares Very Low.
 Our Goods Have All Been Bought For Cash and We
 Can And Will Sell at Eastern Prices. No Goods
 Misrepresented
 Satisfaction Guaranteed
 To Every Purchaser, All Goods Marked In Plain Figures
 And
 ONE PRICE
 Strictly Adhered To. Inspection Respectfully Solicited.
 No Trouble To Show Goods. Don't Forget The Place
 SCOTT & WILLIS.

The firm continued to use this type of advertising for many years. Prices of goods commenced to be advertised in the late 1870's. The fact that both of these merchants hailed from Philadelphia, where both had worked at the dry goods trade, seems significant. Godfrey C. Willis, a draper apprentice in London, had worked as a dry goods clerk in Strawbridge and Clothier, one of the oldest dry goods firms in Philadelphia. Both had been exposed to the advertising and merchandising methods of John Wanamaker, who was among the earliest to use the one-price policy and the money-back guarantee. The Scott & Willis advertising was remarkably similar to Wanamaker's.

In a study of the advertising by other firms after the founding of Scott & Willis, it appears that "The Philadelphia One Price Family Store" enjoyed at least a year of competitive advantage. Late in 1873 a Boot and Shoe store commenced to advertise prices, while another declared in an advertisement "... we publish no prices. . . ." ³² Jewelry stores generally warranted their work, but L. C. Garwood, in addition to the customary "All Work Warranted," advertised: "Clocks at \$2.00 . . . warranted good timekeepers." ³³

In keeping with the depressed economic conditions of late 1873,

³² *Champaign County Gazette*, Oct. 22, 1873, "Boots & Shoes at D. Rugg's . . . Men's Plow Shoes \$2.00, Men's Fine Boots, Good, \$5.00. . . ." Also, *Gazette*, Dec. 24, 1873, W. C. Barrett's "... no prices. . . ."

³³ *Ibid.*, Oct. 22, 1873.

C. B. Whitmore, the first grocer to offer a money-back guarantee (*Gazette*, March 24, 1869), ran the following copy: ³⁴

Good News for Hard Times! I am filling my store jam full of choice New Goods and am going to sell them away (*sic*) down at Bottom figures FOR CASH. . . . Choice Coffee at 25¢, Good Rio Coffee at 22¢. . . . Those who wish to buy goods for cash will please call, as they will not have to pay for the debts of bad customers, as on the old credit plan. CREDIT HAS GOT TO DIE! C. B. Whitmore.

Advertisements catering to "country produce" tapered off after 1873 to relative unimportance. The growth of produce merchants, country elevators, and meat markets (with their slaughtering and lard rendering installations) facilitated the conversion of farm products into money. Expanded, narrow-line retail stores (shoe, jewelry, dry goods, furniture, etc.) had no facilities to handle and store farm products. A trickle of country produce, however, has continued down to the present time to be spent as money with the grocer.

It was two years and five days after the opening of the Scott & Willis store that a leading competitor, Eichberg Brothers, advertised a policy that guaranteed satisfaction. The advertisement appeared in the copy as follows: "P. S. — Any Goods (not cut) purchased at our house, not proving satisfactory, either in price or quality, can be returned and the money will be refunded."³⁵ This amounted to a combined policy of *one price* and *warranted goods*, because the offer had "no strings." However, it was another eighteen months before Eichberg's mentioned "one price" in their advertising.³⁶ From then on they always included the money-back guarantee, the one-price policy, or both in their advertising. On October 20, 1875, in the *Gazette*, Eichberg's commenced to include prices of articles grouped by departments, counters, store locations, or classes of commodities. A typical footnote was "We sell as we advertise."

A. H. Greene opened his Farmers' Cheap One-Price Grocery House in January, 1876. He quoted prices and gave his *motto*, "One price for Everybody." In the same issue of the *Gazette* (January 5, 1876), Dodson and Hodges' copy was simply, "Everybody come & see the \$15 heating stove." The following week, J. S. Miller, dealer in stoves, tinware, etc., while advertising a new cooking stove, "The

³⁴ *Ibid.*, Nov. 5, 1873. The tone suggests that for the time he had abandoned the "money-back" guarantee.

³⁵ *Ibid.*, April 15, 1874.

³⁶ *Ibid.*, Oct. 13, 1875. This advertisement included all of the following nomenclatures, "The New York Store," "The Cheap Store," "One-Price Cash Store" and "Eichberg Bros."

Active," not only made an uncompromising guarantee but he offered to pay dissatisfied buyers for any inconvenience caused them. "N. B. — Perfect Satisfaction is guaranteed. If the purchaser is not satisfied with the working of the "Active," I will refund the money and pay all expenses attending the trial of it."³⁷

Robeson's, founded in 1874 by F. K. Robeson, advertised in June, 1876, as follows: "Greenbacks still good at Frank Robeson & Brother, Farmer's Store . . . Plainly Priced Goods . . . (followed by a long list of priced merchandise)."³⁸

By the end of the decade "warranted goods" was a necessary policy for competitive reasons and the one-price policy was professed by many who included it in their firms' names. For example, Eichberg Brothers were advertising in 1880, "All goods marked in plain figures, and strictly one price for all." The firm next door was Ottenheimer & Co., "One-Price Clothier."³⁹ Except for traditional discounts for the clergy and accepted practices such as a pair of complimentary "galluses" with a ready-made suit, the guarantees of satisfaction and the non-discrimination in price between customers were generally practiced by those who committed themselves to the policies.

The author has not been able to find a one-price policy commitment by the Robeson's store during its nineteenth-century operation. In an interview with Frank Robeson, the son of the founder and owner-manager of the eighty-one-year-old firm, the one-price policy issue was discussed. Mr. Robeson said, "There were some merchants that simply would not commit themselves to a one-price plan, and my father was one of them. He used to stand at the front door of the store, at least so I've been told, and ask departing customers what price they'd paid for some article (purchased in his store). Frequently, he would take them back to the department of purchase and get it for them cheaper." He continued, "When I took over the management in the 1920's, I instituted the first genuine one-price policy we ever had." While further discussing his father's favor-currying, he mused, "I don't know why papa did those things, but I do know that he once knocked a hundred dollars off the price of a fur coat that I had already sold." The firm operated under a one-price plan, as far as the sales clerks were concerned — it was only "F. K." who indulged in the privilege of price shading.

³⁷ *Ibid.*, Jan. 12, 1876.

³⁸ *Ibid.*, June 6, 1876.

³⁹ *Ibid.*, Sept. 29, 1880, and *passim*.

SUMMARY

Money-back guarantee in the early days was undoubtedly a difficult policy to maintain, as each sale was a separate deal. Prices were to some extent predicated on the purchasing medium — cash, barter, or credit. Until the advent of sales slips, the precise amount paid would have been a matter of speculation or memory for cash customers. When the merchant "put it on the tick," it was a matter of rubbing it off the "tick." Further, with the coming of sales slips, merchants had to guard against price discrimination where it might be discovered. With the warranty being only "satisfaction guaranteed," the unsatisfactory goods would be replaced with acceptable merchandise. Price here posed no problem. With the introduction of "money-back" guarantees, however, a one-price policy became inevitable.

The one-price policy appeared in the Twin-Cities thirteen years after the first warranty of satisfaction. The two practices were integrated in 1872, nineteen years after the first warranty. The Champaign-Urbana experience illustrates the sequences of a national movement of great significance. Paul Nystrom says, "The one-price policy has been found very successful in this country and very much in accord with the common sentiments of the American people — equality of opportunity to all. It has resulted in great economies in time for both buyer and seller. The weak and the ignorant have been placed on a level in purchasing with the best. Salesmanship . . . [has been elevated] under the one-price policy from the level of talking about the price to demonstrating the qualities of what is being offered."⁴⁰

⁴⁰ Paul H. Nystrom, "Principles of Retail Store Operation," *Economics of Retailing*, II (New York, 1930), 477.

By James Don Edwards

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Some Significant Developments of Public Accounting in the United States

Business historians have become increasingly aware of the pertinence to their endeavors of developments in the field of public accountancy. The present article is a pithy summary of the rise of the profession in the United States. British precedent and personnel were influential in the formation of early American accounting firms and associations. The movement for state regulation developed early, as did efforts directed at institutionalizing on a sound basis the education of young men seeking a career in the field. Public recognition of the profession came in the wake of the income tax laws of 1909 and 1913, the important effects of which are set forth. Early associations of accountants gave way to new organizations with a broader professional base, while a series of important legal actions have continued down to the present time to alter the nature of the accountants' services and responsibilities.

Public accounting has developed rapidly in the United States, being — from a legal point of view — only sixty years old. Since 1896, when the first legal recognition was given the profession, approximately sixty thousand certified public accountant certificates have been issued by examination, waiver, and reciprocity. Of these about fifty thousand have been issued as the result of having passed official (formal) examinations. About thirty-five thousand certified public accountants are now practicing the profession of public accounting in the United States. The remainder have retired from active practice, or are employed in business, government, or teaching.

ANTECEDENTS AND AUDITS

The subject matter is divided into two main parts. The first major division of the material appropriately is devoted to the antecedents of American public accountancy. These are to be found in English and Scottish public accounting. The Companies Acts of 1845 (amended in 1868 to require railroads to submit audited financial statements to the board of trade and stockholders), and that of

1862 offered new fields of lucrative employment for accountants. The cause for this can be found in Table A of the Act of 1862.

The accounting clause of the 1862 act was as follows: "No dividends should be payable except out of the profits arising from the business of the company."¹ The directors should cause true accounts to be kept and once a year should make out a balance sheet and statement of income and expenditures and present it at the meeting of the stockholders. Once a year, at least, the accounts of the company should be examined and the corrections of the balance sheet ascertained by one or more auditors who might be members of the company after their first appointment in general meeting. The act set forth the form of the report (Table A) which was to be used by the auditor after he had examined the accounts and related vouchers to determine whether, in his opinion, the balance sheet fairly reflected the state of the company's affairs.

The main purpose of the Companies Acts was to establish a certain degree of public control (that is, the necessary knowledge of the conditions attending company formation) and to establish some check on the directors' responsibilities in managing the companies' affairs.²

EARLY PROFESSIONAL ORGANIZATIONS

In an effort to protect themselves and the public in the execution of their duties under the Companies Acts, the public accountants began to organize. The Scottish accountants had established an organization under Royal Warrant granted by the Queen in October, 1854, for the incorporation of an Institute under the name of the Society of Accountants in Edinburgh.³ But it was not until 1879 that a bill was introduced in Parliament for the incorporation of the Institute; eventually the bill was withdrawn in favor of a Royal petition for a Charter of Incorporation.

The formal grant of the charter was made May 11, 1880, incorporating the existing societies into one group for united action. It was named "The Institute of Chartered Accountants in England and Wales." Adequate provision was made for admittance of other persons for membership provided they possessed certain qualifications.⁴

¹ 26 Victoria (Companies Act 1862), p. 83.

² A. C. Littleton, *Accounting Evolution to 1900* (New York, 1933), 293.

³ Richard Brown, *A History of Accounting and Accountants* (Edinburgh, 1905), 208.

⁴ Arthur L. Dickinson, "Profession of the Public Accountant," *The Accountant*, XXXII (May, 1905), 651.

BRITISH ACCOUNTANTS SENT TO THE UNITED STATES

The second important phase was the development of the profession within the United States. Chartered accountants of England and Scotland came to the United States to investigate the records of companies in which British capital was invested. Prior to this there were "public bookkeepers" in the United States, and in most instances these individuals performed some of the functions of a public accountant in connection with other vocations.

Richard Brown of Edinburgh, in his *History of Accounting and Accountants*, published in 1905, leads one to believe that British accountants had visited the United States before the American Revolution. It is known that James Ewing, son of Walter Ewing Macloe, acquired possessions in the West Indies, and one wonders if some of the Britishers who may have come for specific accountancy engagements did not remain and establish themselves to serve American mercantile firms in Philadelphia, Boston, New York City, and Charleston.

FORMATION OF ACCOUNTING FIRMS

A natural development from practicing as individuals was for two or more accountants to associate themselves in a partnership. A firm called Veysey and Veysey was established in New York City in 1866. The senior partner, William H. Veysey, an Englishman who never forswore allegiance to Queen Victoria, established himself in New York in that year. His oldest son, Walter H. P. Veysey, was associated with him.⁵

One of the oldest, if not the oldest national firm, Barrow, Wade, Guthrie and Company, was established in October, 1883, in New York City. From the earliest days of this firm, engagements were taken in different sections of the United States. As far as can be determined, the accounting firms prior to this date were local in their operations. Mr. Edwin Guthrie had come to this country on business while acting in the capacity of receiver of a certain bankrupt financial concern in England. He came to inquire into the value and status of certain property and assets of his client in the United States. Guthrie was a representative of the firm of Thomas, Wade, Guthrie and Company, Chartered Accountants, of London and Manchester, England. While visiting in the United States, it was

⁵ George Wilkinson, "Organization of the Profession in Pennsylvania," *The Journal of Accountancy*, XLIV (Sept., 1927), 162.

evident to this trained accountant that there was an opportunity to establish a firm here. He therefore succeeded in finding an American partner, Mr. John Wylie Barrow, of New York, an actuary, who checked the branch statements of insurance companies in this country before forwarding them to England.⁶

PROFESSIONAL ORGANIZATIONS

Accountants began to organize almost as soon as they began to practice. The Institute of Accountants and Bookkeepers, in 1882, was the first of these organizations in the United States. The available records show that its membership included a considerable number of accountants in public practice and that for its highest class of membership applicants were required to pass examinations which were described as severe.⁷ Then, in 1886, came the American Association of Public Accountants, which was to be called the "Chartered Accountants Institute," until Edwin Guthrie strongly counseled John Heins, of Philadelphia, to use some other name than Chartered Accountant. He pointed out that it would conflict with the use of that title by English and Scottish accountants visiting the United States on professional business.

BOARD OF REGENTS AND THE FIRST C.P.A. LAW

The American Association energetically sponsored an educational curriculum for accountants. Even with the support of the Board of Regents of the State of New York, however, the school was not a success. Though the school itself was a failure, the regents' willingness to open examinations as early as 1892 paved the way for two New York bills which, on April 17, 1896, finally blossomed into the first state laws setting up the professional designation of Certified Public Accountant.

Acting under the authority of this act, the Regents of the University of the State of New York appointed Frank Broaker, C. E. Sprague, and Charles Waldo Haskins to be the first board of examiners under the new Public Accountants Act.⁸

⁶ James T. Anyon, "Early Days of American Accountancy," *The Journal of Accountancy*, XXXIX (Jan., 1925), 2.

⁷ Norman E. Webster, "Early Movements for Accountancy Education," *The Journal of Accountancy*, LXXI (May, 1941), 443.

⁸ C. W. Haskins and E. W. Bells, *The First Fifty Years, 1895-1945* (New York: Privately Printed, 1947), p. 8.

LEGISLATION IN OTHER STATES

After the passage of the New York act, public accountants elsewhere sought their own state laws. The accountants in New York were eager to forward information on their act and give assistance to other state organizations. The Pennsylvania law was enacted in 1899; the Maryland law in 1900; the California law in 1901; the Illinois and the Washington laws in 1903; the New Jersey law in 1904, and the Florida and Michigan laws in 1905.

Additional state legislation recognizing the accountancy profession was passed in Colorado in 1907; in Georgia, Connecticut, Ohio, Louisiana, and Rhode Island in 1908; in Montana, Nebraska, Minnesota, Massachusetts, and Missouri in 1909; in Virginia in 1910. Then West Virginia and Vermont passed their laws, in 1911 and 1912, respectively. In 1913 Nevada, North Carolina, North Dakota, Oregon, Tennessee, and Wisconsin succeeded in obtaining C.P.A. legislation.

FIRST VIOLATION OF C.P.A. LAW

In 1898 the first violator of the New York C.P.A. law was brought into court. This suit, which took place before any other state had even enacted a C.P.A. law, resulted from the publication of the following advertisement in a New York newspaper: ⁹

Accountant — a certified public accountant, highly recommended, will write up books, prepare trading accounts, make investigations, etc., terms, \$6 per diem, or accept permanent situation with firm or corporation — Certified Accountant, Herald.

Authorities checked to find out that this advertisement had been inserted by a John Fenton. He pleaded ignorance of the 1896 act passed by the New York legislation and offered a full apology. He further stated that he was a member of the Society of Accountants and Auditors of England, but after a check had been made his name was not found among the list of members.

When Fenton appeared in Court he pleaded guilty to the charge of using the professional designation "Certified Public Accountant" without having been licensed to practice by the New York State Board. He was fined \$35 or ten days in jail for the violation. The conviction of the violator of this law was made only nine days after the violation. Thus, the accountants were anxious to establish pro-

⁹ "Accountancy in the States," *The Accountant*, XXIV (April, 1898), 349.

fessional standards and maintain them in an effort to acquire the recognition due the profession.

EDUCATION AND ACCOUNTANCY

After the formation of the Public Accountants' organizations, it was realized that elevation of the accountancy profession must come through education, rather than through the enactment of C.P.A. laws alone. With this in mind, in the summer of 1902 the Council of the Pennsylvania Institute authorized the formation of classes for the study of the four subject areas in the field of Public Accounting. The subjects taken up and the instructors lecturing thereon were:

Theory of Accounts, Robert H. Montgomery,
Practical Accounts, W. M. Lybrand,
Auditing, J. W. Fernley,
Commercial Law, H. G. Stockwell.²⁰

By the spring of 1904 negotiations had been successfully carried out with the faculty of the Wharton School of Accounts and Finance and the trustees of the University of Pennsylvania to turn the classes established by the Institute over to the University.

In 1900, the council of New York University established in that institution a "School of Commerce, Accounts and Finance," which established the first department of accountancy, as such, in the world. The institution was skeptical as to the feasibility or advisability of such a step, but at length, heeding the urgings of the committee, an accountancy course was instituted in 1901. The Board of Regents appointed C. W. Haskins as the dean of the new school. Dean Haskins' aim was "to bring together in the school such a corps of trained educators and practicing accountants as would meet the requirements of the State Board of Examiners under the Law of 1896."²¹

NATIONAL SOCIETY OF CERTIFIED PUBLIC ACCOUNTANTS

Legal recognition of the accounting profession in New York led, in 1897, to the incorporation of a National Society of Certified Public Accountants in the United States. Anyone holding a certificate from the University of the State of New York was eligible for membership. The objects of this society were to elevate the profession,

²⁰ George Wilkinson, "Organization of the Profession in Pennsylvania," *The Journal of Accountancy*, XL (Sept., 1927), 170.

²¹ Emanuel Saxe, "The Role of the Society in Accounting Education," *The New York Society of Certified Public Accountants Fiftieth Anniversary*, p. 23.

to unify in one body all Certified Public Accountants practicing in the United States, to exchange professional knowledge by means of lectures and to establish a professional library, and to obtain legal mutual recognition of the letters C.P.A., by and between all states.¹²

The organization was short-lived because in 1899 the National Society and the American Association merged into one organization.

FOUNDING OF THE FEDERATION

Searching for means to maintain the standards set by the new laws, the practitioners in several states had formed societies; practicing accountants also had formed societies even in some states where laws had not yet been passed. George Wilkinson therefore suggested, in July, 1902, that there was a need of establishing a definite relationship among the local state societies, which at that time showed little unity of purpose in affairs of a national character. He suggested a plan for the co-ordination of all existing organizations by forming societies of public accountants.

The first convention of "The Federation of Societies of Public Accountants in the United States," was held at the New Willard Hotel in Washington, D. C., on October 28, 1902. Though the Federation existed only from 1902 to 1905, the principle was firmly established that the interests of the profession demanded and members of the profession would support, a national organization of accountants.¹³

ONE NATIONAL ORGANIZATION AFTER THE MERGERS

In 1905, as a result of efforts of the joint committee of the American Association of Public Accountants and the Federation of Public Accountants, the goal of one national organization was reached. The new organization, the American Association of Public Accountants, had its genesis in the effort to supplement both state legislation and state societies and was a partial remedy, at least, for the recognized defects which had developed in former programs attempting to establish professional standards and professional solidarity by enacting statutes and issuing certificates.

¹² "Accountancy in the States," *The Accountant*, XXIII (Sept., 1897), 858.

¹³ George Wilkinson, "Organization of the Profession in Pennsylvania," *The Journal of Accountancy*, XLIV (Sept., 1927), 173.

THE 1909 TAX ON CORPORATION INCOME

The national tax legislation of 1909 added to the functions of the public accountant. Since the Civil War, the Congress had been attempting to enact an income tax law that was constitutional. A comparatively easy way to acquire the additional revenue needed from business sources appeared to be a tax on corporations, but it was not lawful for the federal government to tax income. George W. Wickersham, United States Attorney General, therefore suggested a franchise tax on corporation income, measured by cash receipts. The Attorney General, in his correspondence with the practicing public accountants that objected to the method of income determination, indicated a desire on the part of the administration to increase the taxes levied on the corporate form of business organization.

The tax on corporation income became law, but the law as written was never enforced. The Treasury Department and the public accountants agreed that the law was confusing in the several respects. It enacted the tax for a calendar year, ignoring the fact that many corporations operated on a natural business (fiscal) year. Because the ending inventory of a mercantile or manufacturing business is the major factor in the determination of income, it was felt that enforcement of the calendar year provision would inflict an undue hardship on business. Furthermore, the tax was to be charged upon the "entire net income," and the net income was to be ascertained by deducting from the gross amount of the income: (1) expenses actually paid, (2) losses actually sustained, and (3) interest actually paid. This "actually paid" definition conveyed the impression that only actual disbursements out of a company's treasury during the year were allowable for tax purposes, whereas many companies kept books on an accrual basis (that is, revenue could be reported before being collected and expenses booked before payment was actually made). There were also complications arising out of confusion between gross income and gross income received. The Treasury and the public accountants finally agreed to determine taxable income according to the procedures then being used in business, but the law evidenced a lack of understanding of business net income by the legislative branch of the government.

In one major respect the 1909 tax law, had it been effective, would have helped the accounting profession. Tens of thousands of corporations had failed to keep books and records which reflected their actual net income. As written, the 1909 law, by levying a tax on

corporation income based on cash receipts and cash disbursements, would have required these companies to set up accounting systems to determine their income. This necessity was avoided when the Treasury Department, ignoring the wording of the law, issued regulations under which corporations paid a tax on income measured by the accrual method.¹⁴

THE SIXTEENTH AMENDMENT AND ACCOUNTING (1913)

The enactment of a constitutional income tax law gave the accounting profession additional functions.

By the latter part of February, 1913, the necessary number of states had ratified the sixteenth amendment to the Constitution, thus paving the way for enactment, on October 3, 1913, of an income tax law, which became effective as of March 1, 1913.¹⁵

The public accountant, who would be called upon to prepare tax reports for large numbers of clients under an income tax law, naturally felt a vital interest in the terms of the law and the provisions for collection. It is understandable, too, that accountants were concerned about the enactment of the 1913 law, remembering how members of Congress had been unwilling to take their advice before the enactment of the unworkable 1909 law. Fortunately, however, Congress asked and received the advice of public accountants before the final income tax bill was submitted to either house of Congress.¹⁶

The new income tax law brought the public accountant into corporation affairs to perform only a narrowly specialized function — the preparation of income tax returns. Once so engaged, however, the accountant undoubtedly brought to the client's attention many other services which the client had no idea could be rendered. These tax engagements, among other things, often led to the revision of accounting systems so as to yield management more financial information. In many cases accountants found that the records maintained by business were inadequate; therefore, it was necessary to reconstruct transactions in an effort to determine taxable net income, to design a chart of accounts to facilitate the determination of net income, and to keep the records up-to-date in order to reflect

¹⁴ Robert H. Montgomery, *Fifty Years of Accounting* (New York: Privately Printed, 1939), 531-34.

¹⁵ Editorial, "United States Income Tax," *The Accountant*, XLIX (Aug., 1913), 152.

¹⁶ Editorial, "A Federal Income Tax," *The Journal of Accountancy*, XV (Jan., 1913), 60.

current earnings in accordance with established accounting principles.

Public accountants were empowered to render further service to their clients in 1924 when the Board of Tax Appeals recognized attorneys and certified public accountants as the only representatives qualified to appear for taxpayers before the United States Board of Tax Appeals.¹⁷

The World War I excess-profits tax legislation and the complex provisions of the war revenue bill, coupled with very high rates of taxation, provided the final stimulus which the profession needed to gain general recognition by the public. The leaders among the practitioners of the day were quick to grasp the significance of the opportunity for service, and were able to convince the business public by work and performance that the public accounting profession possessed the intelligence and initiative to cope with the new problems.¹⁸

QUESTION OF CONSTITUTIONALITY

In the original C.P.A. law of the state of Oklahoma a provision restricting the practice of public accounting to certified public accountants was inserted. This appears to have been the first such clause that had been included in public accountancy legislation. The act specifically prohibited a person from practicing as a public accountant unless he had been certified under the provisions of the act. But in October, 1924, the Oklahoma Court rendered a decision in the case of *State v. Riedell, et al.*, which held that those provisions in the Accountancy Act limiting the practice of accountancy to certified public accountants were unconstitutional.¹⁹

In that case it was the contention of the state that the act prohibited the practice of the profession by one who had not passed the examination and received a certificate of qualifications, and that the enactment of the law was a police power of the state and not violative of the Constitution or any of its provisions. The defendants successfully contended that insofar as the act sought to prohibit the practice of professional accountancy without a certificate issued by the State Board of Accountancy, it was unconstitutional.

¹⁷ Editorial, "Practice before the Tax Board," *The Journal of Accountancy*, XXXVIII (Nov., 1924), 205.

¹⁸ Normal L. McLaven, "The Influence of Federal Taxation upon Accountancy" in Fiftieth Anniversary Celebration (New York: The American Institute of Accountants, 1937), 128.

¹⁹ *State v. Riedell*.

on the basis that it deprived the defendants of their liberty and property without due process of law; that it deprived them of their inherent right to liberty, the pursuit of happiness, and enjoyment of the gains of their chosen profession; that it denied, impaired, and disparaged the inherent rights of the defendants to contract in matters of private concern and in which the public at large and the public welfare, peace, health, and safety were not concerned or involved; that it violated the Bill of Rights by creating a monopoly; that it created an association to which was granted exclusive rights and immunities; and that without any public necessary therefor the exercise of police power by the state in no way affected the public peace, health, safety, or general welfare.

A case which added greatly to the professional standing of accountancy was *J. Harold Lehman vs. State Board of Public Accountancy, et al.*, in Alabama, which challenged the legality of regulation of accountants.²⁰ The Supreme Court of the United States held that the Alabama C.P.A. law was constitutional. That decision by the Supreme Court of the United States, for all practical purposes, placed the state board of accountancy of Alabama in the same category as state boards governing the practice of medicine, law, and other professions.

NATIONAL ASSOCIATIONS

Some of the members of the American Association of Public Accountants considered it to be dominated by New York accountants and therefore felt that a reorganization was necessary to form a truly national group. A group of state societies, as the Association was, must inevitably be characterized by differences of opinion between states, and in many cases jealousies would be expected. With all its merits, the Association, in the last analysis, was considered by some to be only a group of state societies.

The American Institute of Accountants, which replaced the American Association in 1917, solicited members entirely irrespective of their residence or of membership in a state organization. It sought to represent the combined opinion and abilities of all its members, and if differences of opinion arose, these would be between members as individuals — not between organizations.²¹

²⁰ No. 170, Oct. 10, 1923, *J. Harold Lehman vs. State Board of Public Accountancy, et al.*

²¹ "The Record of the American Institute of Accountants," *The Accountant*, LVII (Dec., 1917), 453.

In 1921 the National Association of Certified Public Accountants was formed as a private corporation. It sold some three thousand Certified Public Accountants Certificates in three years before an injunction was issued, at the request of the federal government, restraining it from issuing certificates and confirming the right of the states to regulate the profession. Because of this invasion of the regulatory field, some members of the American Institute of Accountants, which was still admitting noncertified public accountants to membership and was not fostering the passage of additional C.P.A. laws with the aggressiveness that some members felt it should, formed the American Society of Certified Public Accountants to protect and foster the state-granted C.P.A. certificate. The American Society was absorbed by the Institute in 1937 when the latter organization restricted membership to C.P.A.'s.

The Board of Examiners of the American Institute of Accountants offered their first examination on June 14, 1917. The following states used this first examination given by the Institute: California, Colorado, Florida, Michigan, Missouri, Nebraska, New Hampshire, New Jersey and Tennessee.²²

REPORTING STANDARDS FOR CERTIFIED STATEMENTS

The pamphlet, *Approved Methods for the Preparation of Balance Sheet Statements*, issued by the Federal Reserve Board in 1918, contained what the Board considered to be the minimum auditing procedures. The Federal Reserve Board was the first federal governmental agency to approve a set of minimum standards.

For years the general opinion seemed to favor the theory advanced in several English cases (London and General Bank, Ltd., The Leeds Estate, Building and Investment Company, and the Kingston Cotton Mill Company) to the effect that the accountant must exercise reasonable care in the preparation and certification of reports.

The responsibility of the auditor for the maintenance of minimum auditing standards and procedures has been defined in several American court decisions. The most prominent of these decisions was handed down by Judge Cardozo in the *Ultramares Corporation vs. Touche et al.* (255 N. Y. 170, 174, N. E. 441 [1931]). Judge Cardozo actually confirmed the common law concept, which had been held for several years in the United States and England, that

²² Letter from Robert L. Kane, Educational Director of the American Institute of Accountants, to James D. Edwards, dated June 2, 1952.

an auditor should not be held liable to third parties for negligence. The injured party could not hold the accountant responsible for errors in judgment except when fraud was present.

The auditor's responsibility to his client has been ruled on in several cases, the most notable being *State Street Trust Company vs. Alwin C. Ernst*, 278 N. Y. 104 (1938); *Craig vs. Anyon*, 212 App. Div. N. Y. 55 (1925) affirmed 242 N. Y. 569; and the *National Surety vs. Lybrand*, 9 N. Y. 52d 554 App. Div. 226, 233.

The pamphlet issued in 1918 was revised under the auspices of the Federal Reserve Board in 1929. It was reissued under the title, *Verification of Financial Statements*, with the hope that something could be done to encourage the adoption of proper precautions by preparing and distributing a set of instructions which would serve as a guide to accountants, bankers, credit men, and the business public.

Then, on January 6, 1933, accountants were gratified by the announcement made by Richard Whitney, president of the New York Stock Exchange, explaining the requirements adopted by the Exchange that listed companies should have their annual accounts audited by independent public accountants.

Soon after the New York Stock Exchange announcement, the Securities Act of 1933 was passed by Congress. The certified public accountant was pleased at the legal recognition, but he was appalled at the burden of responsibility that was thrust upon him. The 1934 amendments brought all security exchanges under the Securities and Exchange Commission, required stricter adherence to reporting standards, and re-established the accountant's liability.

The most famous case to come before the Securities and Exchange Commission was the McKesson & Robbins case. The importance of this case was such as to require a thorough re-examination of the auditing procedures previously accepted as standard. The voluntary refund of the fees (over \$500,000) to the clients of the public accountant (Price, Waterhouse and Company) in this case indicated to the profession that their liability could be tremendous if found guilty by the Securities and Exchange Commission.

Even before the volume of testimony in the McKesson & Robbins case was completed before the Commission, there began a review of minimum auditing procedures. The president of the American Institute of Accountants appointed a committee to study the publication entitled *Verification of Financial Statements*. The committee's report, *Extension of Auditing Procedures*, was made May

9, 1939. It was the first of several such publications. This report recommended that the corroboration of inventory quantities, either by observing the taking of inventories or by physical test, should be accepted as a normal audit procedure. With regard to receivables, the committee recommended that all should be verified by direct communication with the debtor, either by negative or positive returns. The committee further recommended that the auditor should be elected by the directors and approved by the stockholders. Finally, the recommendation was made that the scope and the opinion sections should be distinct on the auditor's report. When these areas are discussed in accounting literature or between practitioners, the McKesson & Robbins case is most frequently mentioned.

PROFESSIONAL JURISDICTION

As noted earlier, regulatory laws have been passed in several states for the purpose of restricting the practice of public accounting to Certified Public Accountants and registered noncertified public accountants. Prior to the enactment of regulatory legislation noncertified public accountants performed all of the functions the certified accountant did. The C.P.A.'s tended to look on the P.A.'s with disdain. In this atmosphere the need for restrictive legislation developed.

There have been four major legal decisions dealing with regulatory legislation. The first two are the State *ex rel.* Short, Attorney General *et al.* vs. Riedell *et al.* (Oklahoma, October, 1924), and the Frazer vs. Shelton case in Illinois in 1926. In 1932 the Tennessee Supreme Court, citing the above-mentioned Oklahoma and Illinois cases, held that it was unconstitutional to prohibit the practice of public accountancy by those not licensed as certified accountants or public accountants. The fourth case on constitutionality was decided in December, 1936, by the Wisconsin Supreme Court in the case of Wangerin *et al.* vs. Wisconsin State Board of Accountancy, *et al.*²³

At the present time twenty states, plus Alaska and Puerto Rico, have regulatory type accounting laws under which no one may practice public accounting who is not in possession of a license or certificate issued by the respective state authorities.

One of the primary functions of a licensed certified public accountant in auditing corporate books is to determine the corpora-

²³ Charles F. Coates, "State Legislation Relative to the Practice of Accountancy," *The Journal of Accountancy*, LXXXII (Sept., 1946), 224.

tion's income from its books of accounts and to produce a formal statement. Along with the audit, the public accountant, for the last thirty-eight years, has also, as we have seen, been engaged in an important way in federal income tax practice under Treasury Department's rules and regulations.

In recent years there has been disagreement between public accountants and lawyers in the area of federal income tax practice. The most noteworthy incident in this disagreement was the Bercu case, in which a certified public accountant was convicted of the unlawful practice of law. The Court of Appeals of the State of New York, on July 19, 1949, upheld this conviction. After this case the National Conference of Lawyers and Certified Public Accountants formulated a statement of governing principles, but the conflict has not yet been completely settled. The accountant-lawyer conflict is probably the most important problem that will confront the public accounting profession in the years immediately ahead.



BOOK REVIEWS

Standard Oil Company (Indiana), Oil Pioneer of the Middle West. By Paul H. Giddens. New York, Appleton-Century-Crofts, Inc., 1955. Pp. xviii + 741. \$7.50.

The publication of Giddens' volume on Standard of Indiana marks a milestone in the history of the American petroleum industry and a noteworthy contribution to the field of business history. If, as seems highly probable, the forthcoming studies of Standard of New Jersey, Humble Oil, Standard of California, and Shell measure up to the quality of this work the oil industry will be by far the best documented, at the company level, of any major segment of American industry. The story of Standard of Indiana, however, is more than that of the second largest American oil company. It is also the history of the fourth largest manufacturing institution in the United States and of a business concern that played an important role in the economic growth of the Middle West.

Incorporated in 1889 by the Standard Oil Trust to handle the refining and marketing of crude petroleum from the Lima field, Standard of Indiana remained under the aegis of the Standard Oil group at 26 Broadway, New York, until the dissolution of 1911. As a part of the integrated holdings of Jersey Standard, the company concentrated with considerable success on finding a solution to the problem of refining the sulphur laden Lima crude and building a far-flung marketing organization in the Middle West. Some measure of the marketing success achieved is indicated by the fact that by 1910 the company was selling some 85 per cent of the petroleum products within its market area.

The dissolution in 1911 cut the formal intercorporate ties that linked Indiana Standard with supplies of crude from other Standard companies. Of particular interest to the student of the American petroleum industry is the account of the growing, albeit slowly, independence of the management from general policies laid out by the former parent company and the subsequent evolution of the company into an independent, fully integrated giant in the industry.

The author has done a remarkable job in tracing a series of complicated changes in the corporate structure of the company as it adapted its operations to changing needs in the fields of production, marketing, and research. This is also true of his treatment of the major court cases in which Standard of Indiana was involved. The chapter on the ouster of Colonel Stewart is a model of objective scholarship, as is the author's description and evaluation of other top executives. The company's marketing tactics in dealing with competition are neither neglected nor overemphasized. In general there emerges from the book an appreciation of the problems involved in managing a large business enterprise, its mistakes and triumphs, and the major factors that led to its present position in the industry. The story carries the authenticity that comes from a thorough examination of a large mass of corporate documents, supplemented by interviews with personnel long connected with the organization. The nature of the documentation is indicated by extensive footnote references and an annotated bibliography.

It was no easy task to confine the history of Standard of Indiana to one volume. It was obviously impossible within these limits to give a detailed treat-

ment of all phases of the company's activities. The solution was to treat the material chronologically, with each chapter dealing with the major problem or problems facing the management at successive time periods. This approach lent itself to a dramatic treatment of the major events in the development of the organization. It put emphasis upon the dynamic phases of the evolution of the concern with the result that the narrative is seldom pedestrian.

For those readers interested in a more analytical approach, however, the book leaves something to be desired. While much of the pertinent information for such an analysis is included, Giddens has made no explicit attempt to give a complete or connected account of such subjects as the role of management, the development of technology, or the sources and allocation of funds. Especially disappointing to this reviewer was the failure to include any statistical appendices that would give a better quantitative measure of the organization's growth and structural changes.

Measured against the positive contribution made by the author, however, these criticisms do not weigh heavily in the balance. This book takes its place among the growing list of objective company histories that scholars may draw upon with confidence for a better understanding of the role of American business in the growth of our economy. It was made possible by an enlightened management, willing not only to make its records available to a qualified writer but further to impose no censorship on the final results.

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Great Enterprise; Growth and Behavior of the Big Corporation. By Herrymon Maurer. New York, The Macmillan Company, 1955. Pp. 313. \$5.00.

This book by a *Fortune* feature writer tells much more about the behavior than the growth of the large corporation. Its aim is not historical but rather to provide "an over-all rationale," or theory, of the modern big business unit. Such theory is necessary, the author believes, so that "the large corporation can understand itself and explain itself. The explanation is needed if only to insure survival." (P. 295.) To do this, the author agrees, requires an appreciation of the historical growth of the corporation. Acknowledging the contributions made by A. A. Berle, Gardiner C. Means, Robert A. Gordon, Peter Drucker, and John Kenneth Galbraith to the understanding of the modern corporation, Maurer adds that they failed to provide the necessary rationale or historical perspective. But neither, really, does Maurer. He does give some new information. He also synthesizes, particularly in his chapter on "new enterprise, new economics," much current thought on big business into some useful working generalizations about corporate behavior. Yet his study has neither the insights nor analytical successes of those of Drucker, Galbraith and the others.

This disappointing performance results in good measure from the nature of data used. Essentially his approach is sound. "Current facts and conclusions are valid," Maurer points out, "only if they are examined in terms of historical perspective and changing mental climate." (P. 189.) However, in analyzing past and present situations, he relies largely on information from *Fortune*, brief

interviews with managers of large firms and on the more popular biographies and histories of businessmen and firms. The articles and interviews reveal how managers currently describe their operations, while the biographies and histories show how journalists evaluated the same type of operations in the past. Such sources require careful handling. But in using them Maurer rarely distinguishes between actual situations and the definitions of those situations. That is to say he does not differentiate between the real alternatives open to businessmen at any given time and how these men and others later viewed the decisions made about these alternatives. He, therefore, tends to confuse the justification of action with the motivation for it, the rationalization of a situation with the situation itself. The deficiencies of the data and in Maurer's uses of them are most apparent in his lengthy sections on the organization of the corporation and on "early enterprise."

In the first he focuses on the relatively new type of decentralized, committee-managed, organizational structure. In describing the new structure and the various reorganizations that led to its formation, he says nothing about what existed before, except, possibly, to suggest that prior to the change each organization was run as a "one-man show." Because he fails to describe the older types of structures, either the functionally departmentalized and highly centralized organization or the loosely federated holding company, he says little that is meaningful about the reason for the change and the problems involved in creating the new forms. Henry Ford and Gerard Swope may have both run one-man shows, but the problems faced in the reorganization of their companies were very different. For Ford it was primarily the creation of the semiautonomous operating units, for G. E. the devising of an effective controlling central headquarters. Again, because he does not consider the situation at the time of the change, Maurer ascribes the duPont and G. M. reorganizations to Donaldson Brown's desire for a "tool" to evaluate performance. He says almost nothing about far more significant reasons such as duPont's need for an organizational structure to handle its new program of product diversification and General Motors' even more critical need for effective policy-making, supervising, and co-ordinating central headquarters. This failure to observe historical process also, I feel, causes Maurer to misinterpret much about the changing role and functions of the central staff and the non-policy-making committees. And the reason for this failure seems to come from his uncritical reliance on statements made by executives with today's problems and views in mind about changes made in the past.

When Maurer writes about earlier businessmen and firms, his sources cause him even more trouble. Here he accepts with little evaluation the mythology first defined by nineteenth- and early twentieth-century journalists and later sharpened by such editors and writers as Matthew Josephson, Harvey O'Connor, Frederick Lewis Allen, and Burton J. Hendricks. Rockefeller and Morgan are the villains, Carnegie and Ford the heroes, and for the same old reasons. The good men were for production, competition, and service, the bad men were not. Because Maurer, following his sources, rarely considers real situations and alternatives, he, like the earlier journalists, tends to assume that these men had complete freedom of choice. Since they enjoyed free will, those that took the wrong path must have done so because of evil motives of greed for money and lust for power. Today, Maurer continues, managers no longer concentrate on money and power, but rather work for production and

service. A new sense of responsibility, an appreciation of "new values" operating with a new type of business enterprise, he concludes, has created "the great change."

There has, indeed, been a great change. But has it been in entrepreneurial motives and in the development of corporate enterprise, or has it been in the over-all nature of the American business economy and polity and in the position of the corporation in that economy and polity? The large corporation, as Thomas C. Cochran clearly points out in his *Railroad Leaders*, behaved in the nineteenth century much in the same way as Maurer describes it as acting in the mid-twentieth century. It was a managerial enterprise, with long-term outlook, concerned with stable rather than maximum profits and having managers trained to balance the claims of various groups of customers, of stockholders, and of public opinion. What is new, then, is that there are many more large corporations; that they dominate the economy more than they did; that, like the over-all economy, they have become oriented towards the mass consumption; and that they have enormously increased the volume and variety of their products. Finally, in the larger society, their dominance has become at least partly balanced by the growth of powerful government bodies and labor unions.

Maurer's book underlines the need, if any such underlining is necessary, for business history, that is for history based on business records and correspondence and written by authors, who, aware of the more recent generalizations of the sociologists, economists, and psychologists, will differentiate between motivation and rationalization and between the reasons for action and the justifications of it. Such history seems essential, if, as Maurer properly emphasizes, there is an imperative need to understand the institution that so dominates modern social and economic life. And while the detailed story of the individual corporation is an integral part of such history, its focus can be inhibitingly narrow, with the result that the broader significance of the action and rationalizations may be missed. What is called for is the comparative and historical approach used by Maurer but with data taken from original sources and interpretations that make the most of the tools offered by the social sciences. In other words, a proper understanding of the growth and behavior of the corporation and the American business economy requires more historical analyses like Cochran's *Railroad Leaders*.

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The Farmer from Merna. A Biography of George J. Mecherle and a History of the State Farm Insurance Companies of Bloomington, Illinois. By Karl Schriftgiesser. New York, Random House, Inc., 1955. Pp. 243. \$3.50.

The American insurance business, like all American business, is in a continual state of flux. New technological developments are constantly triggering the rise of new forms of insurance. A case in point relates to atomic energy. Insurance companies have been conducting studies in recent years on the possible hazards to be encountered in its use and how best to realize the potentialities insurancewise in those types of industry totally or partially powered by atomic energy. In the 1920's, the automobile and its hazards similarly presented a

new and exciting field of opportunity for insurance men. How one Midwestern company met this challenge successfully is the theme of this very absorbing work by Karl Schriftgiesser.

The story of the State Farm Insurance Companies of Bloomington, Illinois, is intertwined with the biography of George J. Mecherle, its founder and president for many years. Mecherle was an unusually successful Midwestern businessman, who emerged from obscurity during the decade of the 1920's. Shrewd, daring, resourceful, personable, avowedly and unapologetically paternalistic in his relations with his employees, he was also imbued with an unquenchable idealism that sought to benefit his fellow citizens through his search for profits. Brought up in a farm environment and operating a farm to earn a livelihood during his early manhood, he never lost interest in agriculture or in the never-ending problems confronting the farmer. Aware of the farmer's numerous and repeated complaints that automobile insurance rates were too high and that he was being fleeced by the automobile insurance companies then in operation, Mecherle engineered the formation of a company in 1922 that aimed at supplying insurance to this group at low rates in close co-operation with various Farm Bureaus. At first centering its attention on the Midwest, in time the State Farm expanded its scope of operations to a point where it now has offices all over the United States, in urban as well as in farm communities. It is at present the largest automobile insurance company in the United States.

Unlike most histories of business firms written primarily from a human interest point of view, the volume can be of considerable value to the business historian. While describing the vicissitudes of the firm and the role played by the principal protagonists of the drama, the author succeeds in leading the reader behind the scenes and introducing him to the day-to-day operations of a major automobile insurance company. One gains a general notion of the growth of company structure from its initial state of extreme simplicity to an institution of a complex nature. Mr. Schriftgiesser traces the evolution of the organization from its early stages, where personal leadership was the prime factor making for success, to its present setup of a firm conducted in more impersonal fashion and in accordance with the most modern principles of efficient administration. Its path was not always a smooth one. The author does not neglect to describe the obstacles and the occasional setbacks. The reader gains the impression that the company has always been sales- and growth-conscious, and its leadership exercised in aggressive fashion. The author's journalistic background serves him in good stead in his laudable desire to capture the interest and to hold the attention of the reader while sketching company developments in dramatic detail.

While the business historian must take into account Mr. Schriftgiesser's desire to supply a popular history, he cannot ignore the noticeable omissions in the work. Only a few of the more important can be indicated here. There is no discussion of the investment policies of the firm. There is no attempt made to compare developments, even if briefly, in the State Farm with those affecting other automobile insurance companies. One would have liked to see relationships drawn between events in the field of automobile insurance and those in other types of insurance. Finally, a serious omission is the failure to outline broad trends of the organization's history against the background of American economic history.

The biographer has a natural tendency to be so enamored of his subject as

to run the risk of losing any semblance of objectivity. Mecherle's biographer certainly is often justified in his laudation of the undeniable achievements and truly praiseworthy qualities of the founder of State Farm. The unmistakable panegyrics in the volume, however, lend an air of unreality to his portrait of Mecherle as a normal, alert, red-blooded Midwestern businessman, with many of the admirable qualities but certainly also with some of the defects of that vigorous type. While he was far from being a Babbitt, the organizer of State Farm was similar in many respects to the solid citizen often encountered in Sinclair Lewis' novels.

In spite of the shortcomings of the work, the business historian may profit considerably from a careful reading of it. Although it is certainly not a comprehensive business history, it does contribute to a better knowledge and understanding of the automobile insurance industry. The author's ability to write in interesting fashion and with admirable stylistic know-how enhances the attractiveness of the volume.

HARRIS PROSCHANSKY

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• • •

Distribution's Place in the American Economy since 1869. By Harold Barger. Princeton, Princeton University Press, 1955. Pp. xviii + 222. \$4.50.

This work, following studies by the author in *Output, Employment and Productivity in the Agricultural, Mining and Transportation industries*, treats the sometimes controversial and always changing "... place of distribution in the nation's economy." The text, developed in two parts, comprises 94 pages of copy, which are supported by 115 pages of appendixes, a four-page index, thirty-seven tables and four charts. This excellent study was sponsored by the National Bureau of Economic Research, and through this effort a curtain has been pushed aside to permit an eighty-year view of the costs of wholesale and retail distribution. The forty-year era from 1909 back to 1869, according to the National Bureau, was *untrod* ground. These are allegedly the first figures to have been compiled covering the statistical history of distribution in that period.

Generally the approach is an institutional one. Confining the study to the "recognized" marketing institutions, the author selected wholesaling and retailing undertakings as representative of distribution. A running contrast is made throughout by pitting the trends of commodity production against the trends of distribution. To represent commodity production the author selected agriculture, forestry, and fishing; mining; and manufacturing. To the extent that the research was limited to the *formal* middlemen, there was a necessarily omitted quantity of distribution or marketing; for example, the function of wholesaling by branch sales offices of some manufacturers, agents and brokers, and vertically integrated enterprises. Further, pre-selling the market through producer advertising and sales promotion would, of course, bias the results. Do these and other distribution activities — institutional marketing (hospitals, etc.), which shifts the retailing function; governmental marketing (military, etc.), which shifts many of the wholesaling and most of the retailing functions; vertical integration, which eliminates some duplications such as selling and inspection; and others — make marketing more efficient and lower unit costs?

In Part I of the book the trends in employment and output for both the commodity production and the distributive institutions were measured for productivity. And a case for distribution's efficiency appeared hopelessly lost with an early announcement (p. 6) that persons "... engaged in the commodity-producing industries more than doubled between 1870 and 1950; [but] those distributing commodities grew twelvefold." In other words in 1870 for every thousand persons engaged in commodity production, there were fewer than one hundred in distribution; however, by 1950 the latter number had appreciated to about 400. By including the facilitating agencies — finance, transportation, advertising, government, etc. — the census of persons engaged in distribution and services at present comprises more than one-half of the employees in all industries (Table 2, p. 6).

The case for distribution's efficiency was tried on four points of evidence: (1) Labor-input measured in both employees and man-hours, (2) the scope of distribution relatively, (3) shifting of functions, and (4) the quantity of goods distributed.

Starting from a base of weekly hours worked in distributive industries more than 20 per cent greater than hours worked in commodity-producing industries, the hours of work declined more in retail and wholesale firms than in factories, mines, and on farms. By 1950 the differences were negligible. Discriminations in work weeks between industries were brought into line. And too, improvements in machines proved to require a smaller proportion of the workers for less hours to produce goods. The scope of distribution — considering the expanding population, the receding frontier, the improving transportation network in comparison with the located and consolidating producers — became an ever larger fraction of the products entering the distributive system. As production and consumption became less intimately associated, specialization in production became more pronounced.

Propagating from this induced specialization was a succession of "offbrand" or unconventional middlemen. Because of them and for other reasons, one of which certainly could be called competition, marketing functions were frequently shifted forward to the ultimate consumers or users and backwards to producers; however, a new crop of customer services appears to have filled the voids. Nevertheless, compared with production, the amount of goods distributed — or the volume of services performed — per man-hour of employment rose far less rapidly than output per man-hour in commodity production. But, surveying the technological advancements in commodity production and the paucity of the same in product distribution one is "... indeed left with a feeling of surprise that man-hour output [in distribution] rose as rapidly as it did." The appreciation was 1.0 per cent annually from 1869 to 1949 while commodity production averaged 2.6 per cent.

Section I was concluded inconclusively as far as a case for distribution would be concerned.

Part II plunges the reader into the murky waters of distribution costs. The author used "... the difference between the value of commodities leaving the distributive system and their value when they entered the system," as his definition of the cost of distribution. In the popular vein he likened the cost of marketing to the "value added" by manufacturing. (The problem and paradox here is that in terms of efficiency, the more inefficient either the producer or the distributor is, the greater the *value added*.)

The author's cost figures exhibit a slow rise in the distributor's share of the retail dollar through World War I—1869-1919—up 4.3 per cent, while the period from the war to the terminal year—1919-1949—the rise was negligible—up 0.8 per cent (Tables 17, p. 57 and 19, p. 61).

The sources of the author's estimates of cost were "... (1) censuses of distribution taken in Massachusetts and Indiana prior to 1900, (2) surveys and opinions published in trade publications, and (3) historical records of certain individual merchandising firms." (P. xi.)

To combine the early trickle of material with the later flood of data into averaged distribution cost for the economy as a whole a weighting system was needed. *Commodity output* was used for the period prior to our first federal census of distribution, 1869-1929; and the *volume of sales* system was applied to the last twenty years. The author's conclusions on the cost of wholesale and retail marketing supports other studies made of the era from 1909 to 1948. With that reliability in mind one may accept his figures extending back to 1869 as reasonably accurate. Note in the table below all three estimates positioned to the right of Barger's include the compiled costs for the FUNCTIONS of distribution, while the author treated primarily the "recognized" INSTITUTIONS of distribution.

COST OF DISTRIBUTION VARIOUS ESTIMATES — PERCENTAGE OF RETAIL

Year	Lough and Gainsburgh (Finished manu- factured goods)	Barger		Marketing Costs of Producers and Middlemen		20th Cent.
		Whol. & Retail	Plus Trans- portation	Converse	Mantell (Unpublished)	
1869	—	32.7	37.7	—	—	—
1879	—	33.7	39.1	—	—	—
1889	—	34.7	39.8	—	—	—
1899	—	35.4	39.8	—	—	—
1909	35.5	36.5	40.1	—	—	—
1914	35.3	—	—	—	—	—
1919	33.4	36.5	39.6	—	—	—
1925	34.4	—	—	—	—	—
1929	34.0	37.0	41.7	52.1	50.9	51.1 *
1931	33.3	—	—	—	—	—
1939	—	37.3	—	50.5	50.0	—
1948	—	37.4	—	48.1	—	—

* As re-computed by Malebaum in *Quarterly Journal of Economics*, Feb., 1941.

In addition to the estimates on distribution costs, the author did a tireless task in his identification of the channels through which goods flow and have flowed during the course of being distributed. Likewise the estimation of the margin the goods are to appreciate and have appreciated in both stages of distribution during the eighty years was painstakingly treated. Supporting evidence in both is replete. Perhaps from these efforts a joint product may ultimately loom as brightly as the main product. Appendixes "C" and "D", "Sources of Margin Data" and "Bibliography of Periodicals in Retail and Wholesale

Trade to 1919," (pp. 152-215), appear to represent one of the most extensive references to sources of original and contemporary material to have been compiled in this post-Civil War to World War I era.

The contribution this book has made and will make to the field of distribution appears to be great and will certainly provoke more study in this newly illuminated period. Starting from this vantage point, future studies may combine Barger's findings more easily with the relatively untouched marketing functions performed by producers and their agents. Every reference library should include a copy of Harold Barger's, *Distribution's Place in the American Economy since 1869*.

WAYLAND A. TONNING

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• • •

Labor's Untold Story. By Richard O. Boyer and Herbert M. Morais. New York, Cameron Associates, 1955. Pp. 402. \$4.75.

In their prefatory note, the authors of *Labor's Untold Story* state their purpose as "a survey of the struggles of American working men and women for a better life and a more democratic society for all Americans." The antagonist in this struggle is "industrial capital," which, they say, began its hegemony over American life just after the Civil War. The book traces the progress of the labor union movement, renascent as the men in blue and gray returned from battle, beginning with William H. Sylvester and his National Labor Union to the present coalition between the two divergent forces within the movement.

The authors make no claim that this account is a history. It is a *story*, dramatically told, episodic, circumstantial — and extremely one-sided in its judgments. The materials from which they worked are listed in a useful bibliography. Government documents such as the reports of various commissions and hearings before legislative committees are their primary sources, as well as newspapers, union publications, and autobiographies, published letters, and diaries. In addition they acknowledge a debt to many secondary sources.

From the hearings and personal records the authors have culled direct quotations and descriptions that give an eye-witness vividness to the incidents they recount. With a flair for epithet they have brought dozens of people to life, well-known and obscure, some of whom will not again sink comfortably back as a name on a two-dimensional page. Jay Cooke stands, on the day his banking house closed, with his face to the wall as tears trickle into his blond beard. Compers struts, a chunky little man, "fond of high silk hats and the company of the great." The wife of an imprisoned coal miner crouches at the gate shaking the bars in desperation.

Conflict is the keynote of the book. It is a chronicle of strife from the violence and bloodshed of the Molly Maguires and the Homestead and Haymarket riots, through the increasingly better organized strikes of the early twentieth century, to the sit-down strikes at Flint in 1937, when strategy and bargaining of a sort took the place of violence. It shows the slowly grinding wheels of labor legislation and still slower practical application of the laws as court decisions frequently invalidated the gains that labor hoped it had made. The book is a chronicle also of conflicting forces within the union movement, particularly the pull of craft pride against industrial solidarity that gave

the AFL ascendancy over the Knights of Labor and later splintered off the CIO. For these authors there are no doubts on that issue. A unionism to fight big business must be a unionism to embrace all workers. Back in Gompers' time the "antiquated craft unionism" of the AFL was dragging its heels to the detriment of progress; it continued to do so as William Green and other craft-minded leaders fought the organizing campaign of John L. Lewis and Philip Murray in the late 1930's. "The CIO was the leaping flame, suddenly blazing bright in the long night of the open shop." (Page 225.)

But the title of the book is puzzling. How much of all this has been until now an *untold* story? Certainly numerous other writers, as the authors' own bibliography attests, have searched behind the plain and garbled facts to find the chain reactions of conflicting motives, and many of them have written with labor's interests uppermost. Boyer and Morais apparently see their contribution as unusual in two respects. First, they place labor within the circle of its environment in American life. "It has never lived in isolation. . . ." "In the long view of history the machinations of J. P. Morgan, merging banking and industrial capital . . . , may have governed the course of American labor more than the plans of Samuel Gompers." (Page 12.) The book is a masterly job of compression, packed with facts and episodes. Thus in one volume it presents a broad résumé of material often more narrowly treated. Secondly, the authors set out to tell a part of labor's story which, they say, "is often concealed by scholarly class bias," and here their work is less effective because the bias of their own approach offers no balance of judgment.

Written in a sustained fervor of indignation, the book presents a black and white picture. Subtler shades of analysis are left to more deliberate observers. The style has a polemic quality that in some measure defeats its own purpose, since even a sympathetic reader is likely to feel the hackles of dispute rising. In the face of some patent exaggeration he wonders whether the impression that all strike violence was started by cops or militia may not be a matter of over-emphasis. When embattled farmers, striking against ruinous prices, upset trucks and destroyed the produce of their fellow farmers who were not joining the boycott, was not the coercion just as heavy-handed as if it had been carried out by hired ruffians of big business?

Nevertheless, to the constantly growing segment of our population whose personal memories do not penetrate beyond the Wagner Act and who sometimes apparently believe that the labor movement was born with a gold-plated Section 7a for a teething ring, this book may be a salutary reminder that labor's present status is the outcome of a century of struggle, the bitterness of which must inevitably flavor the outlook of labor leaders today.

JOSEPHA PERRY

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Yankees and Creoles: The Trade between North America and the West Indies before the American Revolution. By Richard Pares. Cambridge, Harvard University Press, 1956. Pp. 175. \$4.75.

Mr. Pares, in the preface to a previous book (*A West-India Fortune*), argued that until detailed study is devoted to the records of individual businesses, "we shall be talking about the history of economic policy, not about economic his-

tory." The resulting volume, a study of a plantation enterprise, was a stimulating addition to that small English bookshelf which transatlantic historians are still somewhat reluctant to label "business history." The present work is, perhaps, more easily classified as "economic history" even on this side of the water. It deals with colonial trade to the West Indies: the goods and markets involved, the factors influencing merchants' choices between them, the structure of trade and the disturbances to it, and the techniques which businessmen used. Lack of source material makes it impossible to answer many interesting questions. The balance of trade, the quantitative variations in exports and imports, the detailed transactions and profitability of individual businesses, are all shrouded in statistical darkness. Nevertheless, Mr. Pares is still able to present an interesting and useful history. On the one hand he offers a generalized view of the pattern of Caribbean trade, on the other he can construct a composite picture of the American merchant and his activities in that area.

As seen by the author, the West Indian trade was largely undertaken for its own sake, and not merely to obtain remittances to England. By the eighteenth century it was largely managed by Americans — principally operating from Boston, Philadelphia, New York, and Newport. Exports fell into three broad categories: livestock and horses for the sugar plantations, provisions (bread, flour, pork, beef, butter, fish) to feed the plantations' slave labor, and the wood so essential to house the islanders and store their products for shipment. Return cargoes consisted of sugar, molasses and rum, together, perhaps, with some small quantities of salt, cotton, cocoa, indigo, and coffee.

Mr. Pares' book adds little to existing knowledge of the eighteenth-century exporter-importer. Yet it provides a demonstration of how he operated within a particular environment. In the absence of professional specialization, the merchant owned the small ships which carried his goods, and insured the latter with other traders while himself underwriting *their* cargoes. Partly in an attempt to spread risk, his exports were extremely diversified. Since markets were too remote for informed decision-making from a Boston or New York countinghouse, enormous responsibility had to be delegated — most often to the ship's captain, who thereby assumed an entrepreneurial role hardly less important than that of his capital-providing principal. The captain had to decide which of many islands had the best market to offer; he had to choose between sale on credit and barter (for direct cash payment was rare); he might well have to stay behind on the island, to overlook unsold cargo or collect unpaid debt. Sometimes these matters were handled by resident factors, but only very rarely would the merchant himself be able to assume any initiative, and even the most detailed instructions were likely to end with the admonition:

and in all cases & circumstances do that which you are well assured will be best for us, as it is impossible for us to give you particular directions how to act in all cases & circumstances, we must and do leave the whole with you.

No business venture was complete until the return cargoes had been marketed. If there were no attempt to transport West Indian goods to England, then the merchant resumed the initiative when the sugar, rum, or molasses were brought into harbor. But the choice was still wide: should he sell the cargo in its natural state, or (in the case of molasses or sugar) have it processed? Perhaps a reshipment to the Newfoundland fisheries (in summer) or to the tobacco plantations (in winter) would increase profits, although it lengthened turnover.

If marketing were done locally should this be by wholesale or retail? With the prevailing acute scarcity of cash he was frequently forced into barter operations and perhaps even into opening a retail store where farmers could exchange "country pay" (the provisions and lumber which went to provide further exports) against molasses and rum.

Thus the American merchant (like most merchants before the nineteenth century) was a jack of all trades: exporter, importer, financier, insurance underwriter, shipowner, warehouseman, wholesaler and retailer. Bad communications, disturbed weather and politics, the susceptibility of markets to glutting and prices to fluctuation, the vagaries of colonial regulation: all these placed a premium on flexibility of outlook, and routine administration hardly appeared in the calendar of business virtues. The book under review deals with all this, and with the broader issues of trade, in a clear, concise, and well-organized manner — not the least merit of which is its commendable brevity. The problems of the eighteenth-century merchant were many. Primary among them was that of too-lengthy turnover: again and again we see signs of restlessness while capital was tied up in idle ships ("worms eating the bottom, men the top") or in goods held as the result of yet another enforced barter transaction. In addition, the businessman, forced to delegate decision-making, ran up against the difficulties of securing efficient agents and of controlling them. Bad debts plagued his life and an atrocious monetary system introduced even more uncertainty into the commercial outlook. *Yankees and Creoles* easily demonstrates that the view which holds colonial trade to have been so well organized as to function with the precision of clockwork and the regularity of perpetual motion, is not the least misleading of historical myths.

BARRY E. SUPPLE

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Studies in Ancient Technology. By R. J. Forbes. Leiden, E. J. Brill, 1955. 3 vols. Pp. x + 194; vi + 215; vi + 268. 52 guilders.

Any list of the forces that have altered men's lives in any major historical period, ancient or modern, must certainly include technology. Whether our concern is with the change in primitive man from a food-gathering to a food-producing creature, or with the shift from animal, wind, and water power to the use of coal, oil, steam, electricity, or atomic power, technology looms as a gigantic force in social change. The continuing technological revolution is apparent to anyone who compares the age in which he lives to any previous age, even that of a decade ago. From such considerations, the reader might at once conclude that the history of technology is a major focus of research for sociologists, economists, and historians. Yet it is a fact that nowhere in the world at the present time is there a center for studies in the history of technology. Furthermore, there is not (to my knowledge) a professorship in the history of technology in any college, university, or technical institute. Nor is there any center where graduate work leading to the higher degrees of either A.M. or Ph.D. exists in this subject. This strange situation may possibly be susceptible of explanation by sociologists, but here it is important only to record the fact and to lament it.

The difficulty in making a critical appraisal of Dr. Forbes's work derives

from the fact that the field of the history of technology is so little cultivated that one is apt to search almost in vain for other products of research against which to take its measure. In recent years two notable books on this subject have appeared. One is Professor Abbot P. Usher's *A History of Mechanical Invention*, issued by the Harvard University Press in 1954, a revised edition of his earlier book of 1929. The other is the first volume of *A History of Technology*, edited in England by Professor Charles Singer in collaboration with E. J. Holmyard and A. R. Hall. The latter work is to be completed in five volumes, and is a collection of essays, by different authorities, which covers the main aspects of the development of technology in the West up until the nineteenth century. At the present time, whenever one thinks of the history of technology, the name of R. J. Forbes at once leaps to mind because of his *Man the Maker* (published in 1950, a general survey of the development of technology), his books on the history of distillation and on metallurgy in antiquity, and his general bibliography of writing dealing with technological subjects.

Since a pioneer in a historical field begins with the beginning, we are not surprised to find that most of Professor Forbes's works are devoted to ancient technology. Volume One deals with the use of bitumen and petroleum in ancient times (chiefly as a building material and as fuel for "Greek fire"), the origin of alchemy in relation to the rise of metallurgical techniques, and the history of water supply to towns. Volume Two presents a history of methods of irrigation and drainage, watermills and windmills, and the early development of land transport (notably road construction). Finally, Volume Three contains an account of ancient cosmetics and perfumes and of paints, pigments, inks and varnishes; and a series of studies on food problems—ancient flour, bread, olive oil, vinegar and alcoholic beverages, also methods of crushing, grinding, and preserving food. Although the scope of these volumes is limited to antiquity, Dr. Forbes brings each subject up to a more recent date, whenever feasible. His method is either to append a chronological table to an essay, or to conclude by a series of comparisons between ancient and modern times. For example, Dr. Forbes describes the testing and purification of drinking water, then and now, and presents statistical data on the public water supply in gallons per head per day in ancient Rome, medieval Paris and London, nineteenth-century Manchester, Liverpool, Edinburgh, and Glasgow, and mid-twentieth-century Leipzig, Frankfurt, Munich, and New York. An appendix presents a chronological survey of the story of water supply, beginning with the building of steamed wells and drainage systems in the cities of the Indus Valley about 2750 B.C., and ending with the construction of the Kolber (Germany) aqueduct in 1500, a time when Suleiman the Magnificent similarly reconstructed the aqueducts of Valens and Justinian, and added one of his own in Constantinople.

In this series of small books, the author's intention is to present essays on ancient technology which cover the preclassical and classical periods and which thus demonstrate the continuity and divergence of technological traditions. It is his aim "to describe certain phases of ancient technology, to point out the gaps in our knowledge and to try to use modern technology, philological and archeological evidence to sketch ancient technology in such a way that it may be of some use to inform historians, archeologists and philologists on the skill and the material world of the ancients." As he writes clearly

and easily, and bases his information on a vast erudition and a practical knowledge of our own technology, Dr. Forbes's three volumes should be of interest to many classes of readers, to historians, of course, but also to all who are eager to find out how man has transformed the world in which he lives. It is probably too much to hope that the publication of these excellent essays may stimulate some university president to inaugurate the serious study of the history of technology by seeking an endowment for a professorship; but perhaps the exciting nature of the problems discussed may tempt historians and philologists to pursue those aspects of their own research that are related to technological developments, and to help illuminate the story of man's conquest of his environment.

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